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Tindara Addabbo · Edoardo Ales
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Performance Appraisal in Modern Employment Relations

An Interdisciplinary Approach

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ISBN 978-3-030-26537-3 ISBN 978-3-030-26538-0 (eBook)
https://doi.org/10.1007/978-3-030-26538-0

This Palgrave Macmillan imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

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He has constantly attended as a presenter and session organizer the most prominent world labour conferences and in 2017 he has created an international study group on labour law and industrial relations which gathers scholars from Brazil, Cambodia, Italy, South Africa and Sweden.

As a teacher, he has been working in Italy, Sweden and the Kingdom of Saudi Arabia at bachelor and master level. He has also completed several pedagogical courses focused on how to better teach and organize courses in higher education.

His main areas of research cover employment contract law, industrial relations, comparative and EU labour law and privacy law. His recent publications include *The links between the different levels of collective bargaining: open issues*, in Rivista Italiana di Diritto del Lavoro (2018), 4 (in Italian), *The role of the Swedish government and trade unions in managing the Volvo cars crisis in 2008–2010 and its impact on the Swedish system*, in A. Perulli, S. Bellomo (eds.),*New Industrial Relations in the Era of Globalization* (2018), Wolters Kluwer and *Worker's privacy between the reform of art. 4 St. lav. and the EU GDPR*, in Diritti, Lavori, Mercati (2019), 2 (in Italian).

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Introduction

Olga Rymkevich

Introduction

Performance appraisal is not a new issue. However the way companies carry out their employees performance evaluation dramatically changed over last decades. The advent of new digital technologies provided much more opportunities and flexibility in this regard. Considering the need to keep pace with rapid technological changes, also performance management systems continue to evolve. It is not a secret that efficient performance appraisal systems represent a source of achieving competitive advantage for business contributing to better human relations at the workplace, major employee satisfaction with work and better productive efficiency. Clearly, one size fits all approach is not a case in relation to performance evaluation as performance appraisal techniques well suited for one company would not necessarily work for another. Undoubtedly

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_1

rethinking performance appraisal strategies and design is a priority for a large number of modern companies which are increasingly moving away from traditional performance evaluation practices towards more individualised and participatory based approach better aligned with particular organisational structure, corporate culture and individual and corporate strategic goals.

The technological transformation generated by digitalisation has brought about far-reaching changes affecting all spheres of life including employee performance evaluation. Along with indefinite and still not fully explored opportunities, they have given rise to a number of risks, some of which are evident whereas others are hidden. This book is the outcome of an ongoing multidisciplinary and interdisciplinary project run by the Marco Biagi Foundation (University of Modena and Reggio Emilia, Italy) seeking to cast light on the new challenges and trends in the world of work arising from digital technologies. It brings together the contributions of experts in labour law, labour economics and human resource management, with a focus on the dynamics of performance evaluation techniques explored from various angles. Along with a general analysis of performance evaluation in the public and private sectors, the study examines such aspects as power, autonomy, discretion and control over work performance, and the new balance of rights and obligations at work, examining the impact of digitalisation on the right to privacy and the right to lie, the discriminatory potential of the new methods of performance evaluation including the role of customer ratings, and the impact on the employment contract. The book proposes an original mix of theoretical and empirical research including case studies and case law from different national contests such as Italy, the US, Sweden, Spain and Poland along with the case law of the Court of Justice of the European Union.

The book is divided into two thematic parts providing an outline of the topic, with the first part providing useful insights into the main legal, management and economic concepts that are further developed in the subsequent chapters.

The paper by Tommaso Fabbri, Ylenia Curzi and Barbara Pistoresi provides an overview of the main changes that technological transformation has brought about in organisations by studying performance management systems. The aim is to understand the main trends in

organisations, in particular considering whether they are moving away from a system of management based on close surveillance and traditional assessment methods (time spent in the office, working hours and compliance with routine procedures) towards more innovative techniques (such as results, skills and personnel development) in some cases leading to greater employee autonomy and responsibility towards the company. The empirical part of this study is based on a survey of Italian workers and firms in the private sector.

Based on the theoretical and empirical findings, the authors highlight the increasingly important role of non-traditional performance appraisal methods with a focus on newly acquired skills compared to those previously acquired, and the role of mediation as a way to ensure improved employee satisfaction and facilitate innovative work behaviour. Considering the lack of comparative research on this topic the authors seek to fill the gap in the existing literature in this regard.

The paper by Tindara Addabbo proposes a study on the potential gender discriminatory effect of performance appraisal systems. The author provides evidence in support of her argument by means of a comparative multivariate analysis on wages and working conditions by gender, age, level of education, type of contract, firm size, profession and sector in various European countries, taking the Nordic countries as the main reference. The study highlights the lower ratings assigned to women in performance appraisal schemes, contributing to the persistent gender pay gap.

The second part presents an analysis of power in sociological terms with the aim of ascertaining whether and to what extent the introduction of digital technologies is capable of altering the balance of interests of employers and employees, and the impact on the design of performance appraisal systems. In addition, this part addresses the ways in which legal provisions can interfere with the spontaneous power dynamics associated with new technologies, as well as the dynamic aspect of performance appraisal, with regard to particular matters linked to the application of new technologies such as data analytics, the right to lie, and the use of customer ratings.

The paper by Lia Tirabeni proposes a reflection on the pros and cons of ubiquitous technologies while underlining their opportunities and

hidden risks in shaping power relations in the workplace, as well as the implications for worker performance appraisal. The lack of comparative research into new ways of monitoring by means of wearable technologies, including self-tracking by employees. These technologies provide wider opportunities for the monitoring of in-work and out-of-work behaviour of employees, that could be used by employers both to the benefit and the detriment of the employee. In particular, this information could be used for employee deskilling or upskilling, to promote physical and psychological well-being at work through better adaption to specific needs as well as for discriminatory and disciplinary purposes. The mere fact that we witness a clear shift of management control from employees to platforms with big data gives rise to ethical and social justice issues concerning the limits of such control by means of smart monitoring tools, employee privacy protection and employee consent. In conclusion the author argues that to ensure a more balanced relationship and to mitigate potentially negative effects, ubiquitous technologies should entail more participatory performance appraisal systems and a games-based approach should be promoted.

In her paper, Elena Gramano argues that the subordinate employment contract still plays a crucial role in providing organisational and functional flexibility, and the concept of subordination is consistent with the changes arising from digitalisation and new forms of atypical employment relations. In her analysis of recent Italian labour market reforms, she identifies a declining role for legal regulation compared to the collective and individual dimension. In the author's view, collective bargaining offers better opportunities to determine the conditions of the individual employment contract by means of "controlled flexibility" or "negotiated flexibility", laying down reasonable limits on unilateral employer power. In defending the central role of the subordinate employment contract, the author analyses the rights of the parties to unilaterally change the employment duties (*jus variandi*) and modulate individual agreements in terms of internal flexibility as an alternative to the use of atypical contracts or easy dismissal options.

In her paper Leora Eisenstadt outlines the dangers of the use of data and predictive analytics in a legal and ethical perspective. In particular,

she highlights the potential to blur the dividing line between work and non-work to the detriment of the parties in the employment relationship. The author argues that such a blurring of the work/non-work spheres has an impact on the notion of the scope of employment, with the risk for employers of finding themselves exposed to legal liability for the off-duty behaviour of their employees. The author argues that the data collected are frequently used to determine dismissals and promotions, future hiring policies and personal insurance rates, in many cases without the knowledge or consent of the employees. The use of data analytics can take various forms, ranging from the analysis of social media profiles to facial scanning to identify the emotional state of workers in the workplace and predict future plans such as family planning decisions. From this point of view, new technologies can offer far more sophisticated opportunities for employers to constantly monitor their employees compared to increasingly obsolete traditional methods such as monitoring e-mails, phone calls, social media profiles, internet use or medical reports. Such information can arguably be used to improve productivity and employee well-being (as claimed by the developers of the specific programmes and software). However, this does not alter the fact that the use of such technologies is a clear intrusion into the personal life of the employee. Moreover, in the case of a distorted use of such information on the part of the employer, the existing legal framework is still inadequate to deal with the cases of potential discrimination (such as the intention to become pregnant in the future). There is also the issue that employee performance is evaluated not only on the base of work-related behaviour, but also on the basis of off-duty lives based on subjective and by no means transparent criteria. The author concludes by urging a rethinking of the value of life outside of work. If it is still considered to be a value to be defended, then it is important to decide to what extent it should be protected against the rising tide of increasingly innovative and pervasive technologies.

Federico Fusco provides a critical overview of the issue of employee privacy in relation to the enactment of the General Data Protection Regulation (EU Reg. 2016/679) in Italy, Sweden and Spain, along with an analysis of the recent case law of the Court of Justice of the European Union (CJEU). In particular, the author focuses on the issue

of the employer making use of camera surveillance in the workplace, the power to monitor the personal files of the employee on the computer at work, and the possible use as evidence in the courts of information obtained by employers in violation of the GDPR provisions. The author examines national and European court approaches towards the balancing of employer interests for improving competitiveness and the right of the employee to maintain a private "safe zone" free from external interference. By analysing different national legal approaches adopted in the various countries and the role of GDPR, the author comes to the conclusion that opposing interests may be reconciled both with and without special labour law provisions regulating the remote surveillance of employees, on condition that proper preventive measures and sanctions are adopted, with due consideration for the specific characteristics of the national legal and social setting.

In their paper Izabela Florczak and Marcin Wujczyk propose an original analysis of the right to lie of the employee as a countermeasure aimed at self-defence against excessive and unlawful control by the employer and potentially discriminatory practices. In the first part of the paper, the authors provide a general reflection on the concept of privacy and the notion of the right to privacy. The second part is dedicated to a more critical analysis of the right to lie of the employee, and the applicable conditions and limitations, the lawfulness of such practices, the extent and conditions of their admissibility and the role of employee subordination in determining the right to lie. The authors argue that as the weaker party in the employment relationship, the employee is entitled to lie as a defence mechanism, on specific conditions. In any case, even in the case of excessive use or misuse by the employee of such a right, the sanctions imposed by the employer should be mitigated.

Roberto Albano, Ylenia Curzi, and Arianna Radin explore performance appraisal in relation to the professional delivery of public social services, arguing that it is an extremely challenging issue due to the high level of uncertainty and complexity. In particular, they highlight inevitable tensions between the need to improve the autonomy and skills of social workers, and at the same time to secure more rapid and efficient management control over the performance of these workers. The authors claim that these two objectives can be reconciled, and indicate

possible ways to do so by analysing theoretical approaches to the assessment of social services proposed by sociologists and scholars of organisation theory. In addition, they analyse a particular case of the Piedmont Region in Northern Italy linked to the implementation of a social service information system. In the view of the authors this experience is important in terms of the lessons to be learned from its failure. The authors conclude that the efficient functioning of social services in the public sector is fundamental for the success of social policies, and an appraisal is needed characterised by transparency and accountability. In order to ensure its successful implementation, cultural change is needed ensuring an active role for all the stakeholders concerned.

Finally, Rossana Ducato, Miriam Kullmann, and Marco Rocca argue that the use of customer ratings in employment decisions can produce extremely negative effects such as unjustified discrimination. They demonstrate how customer ratings can be based on non-employment related issues such as the race, sex, age and religion of the worker. The authors support their claims by analysing European anti-discrimination legislation as well as data protection law addressing the question of employer liability in the case of a distorted use of customer ratings. Based on recent CJEU rulings, they argue that the lack of an identifiable complainant cannot lead to the conclusion of the absence of discrimination, while customer preference is not a genuine occupational requirement that can justify discrimination. In these cases the CJEU often adopts an approach in which discrimination based on customers rating and algorithms is attributable to the employer. Finally, the authors argue that both US and EU law are still ill-equipped to fight discrimination based on customer ratings, and even the GDPR cannot offer sufficient remedies in such cases. On the basis of these considerations the authors propose alternative pathways to limit the discriminatory potential of customer rating and the use of algorithms.

In the concluding chapter Edoardo Ales examines the performance appraisal within the employment relationship as well as considering whether it is appropriate for enterprises to adopt an achievement-oriented approach distinguishing between a basic understanding of performance as the fulfilment of contractual obligations and a more advanced understanding of this concept as individual or collective

effort that is essential for the successful outcome of the undertaking as a whole. Moreover, in a strictly legal perspective such an approach permits to cast light on the highly controversial concept of underperformance.

The author argues for the essential role of benchmarking in determining the scale of performance appraisal in comparative terms, further illustrating this theoretical framework by examining two different sets of case-law rulings from Italy and Germany.

In conclusion the author argues that the adoption by employers of an efficient achievement-oriented approach could lead to an effective system of incentives and sanctions, increasing the chances of improving work organisation and leading to mutually beneficial outcomes both for employers and employees.

Part I

Setting the Framework

2

Performance Appraisal Criteria and Innovative Work Behaviour: The Mediating Role of Employees' Appraisal Satisfaction

Ylenia Curzi, Tommaso Fabbri and Barbara Pistoresi

Introduction

Performance appraisal (hereafter PA) is one of the most important human resource management practices (hereafter HRM). It refers to a process by which the employee's performance assessment is based on clearly stated appraisal criteria. Moreover, PA is intended to improve

This chapter is the result of a common undertaking. Ylenia Curzi and Tommaso Fabbri contributed design and conception of the study. Ylenia Curzi and Barbara Pistoresi organized the database and Barbara Pistoresi performed the statistical analysis. The sections of the manuscript were authored as follows. "Introduction" by Tommaso Fabbri. "Theoretical Background" and the related sub-sections ("Performance Appraisal Criteria and Innovative Work Behaviour" and "Employees' satisfaction with Performance Appraisal as a Mediator") by Ylenia Curzi. The section "Method" was authored as follows: "Sample" by Barbara Pistoresi; "Measures" by Ylenia Curzi and Barbara Pistoresi; "Empirical Strategy" by Barbara Pistoresi. Finally, "Results" was authored by Barbara Pistoresi and "Discussion and Conclusion" by Ylenia Curzi and Tommaso Fabbri.

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_2

individual performance and align individual objectives and behaviours with the organization's strategic goals (DeNisi and Murphy 2017).

Despite this, PA is at the centre of a lively debate concerning its effectiveness. Since McGregor's (1957, 1972) influential work, who develops a systematic critique of performance appraisal, both academics and practitioners have pointed out the limits of performance appraisal systems. They are too bureaucratic, disjointed from the daily work activities and inherently backward looking. Moreover they fail to clarify to the employees what the management expects from them and to provide effective performance feedback, finally they do not improve workers' performance and their skills, in particular they do not enhance their innovative behaviour (Cappelli and Tavis 2016; Pulakos and O'Leary 2011; Pulakos et al. 2015; Schrage et al. 2019).

For these reasons, some authors suggest to the organizations to eliminate completely performance appraisal as human resource practice (Culbert 2010), while others highlight that even if companies get rid of PA systems, evaluation is still done, but in a more subjective and non-transparent way (Pulakos and O'Leary 2011; Goler et al. 2016).

Thus, the key issue becomes how PA systems and practices should be designed and implemented so as to be effective, accepted and used. Regarding this, Cappelli and Tavis (2016), Schrage et al. (2019) and Schwarzmüller et al. (2018) underline that in today's digital business environments, organizations should adopt approaches to performance appraisal encouraging employees' innovative work behaviours (hereafter IWB). Specifically, they argue that PA systems focused on results, skills and personnel development rather than on such traditional criteria as time spent in offices and factories, working hours and compliance with procedures, prescribed working behaviours and methods could be more effective. However, extant HRM literature has not yet offered any definitive conclusion as to which performance appraisal criteria, among

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individual results, skills or new competences, matter most. More importantly, research has not yet devoted enough attention to two issues of great interest to practitioners and academics alike. The first concerns the understanding of the mediating mechanisms or processes liking PA based on individual results, skills or new competences to employees' IWB. The importance of this issue is suggested by Ulrich (1997) who, in more general terms, emphasizes the need for additional research on *how* HRM practices lead to their desired outcomes. The second critical question is whether and how PA systems combining result and competence-based criteria (*mixed PA systems*) affect IWB.

To fill the above gaps, this study focuses on result and competence-based PA systems as well as on mixed PA ones compared to traditional forms of performance evaluation. Specifically, it analyses how they influence IWB, by hypothesizing that employees' satisfaction towards PA is a key mediating mechanism linking PA criteria and IWB. This study is based on self-reported data about PA criteria, employees' PA satisfaction and the influence of PA on IWB. Data are collected from a sample of Italian employees working in companies operating in several sectors.

This work is part of a wider research programme named "National Observatory on Performance Management", established in 2016 at the Marco Biagi Foundation and conducted in synergy with the interdisciplinary Doctoral School "E4E" (Engineering for Economics/Economics for Engineering) of the University of Modena and Reggio Emilia. The aim of the program is twofold. Firstly, to collect data on a regular (i.e. biennial) basis to provide a comprehensive and updated picture of performance management systems and practices currently in use in Italian companies so as to fill the gap left by existing surveys carried out at the national and European levels[1] which explore this topic only to a very limited extent. Secondly, to produce an interdisciplinary description and analysis of Italian corporate performance management systems and practices as a preferential setting for understanding the digital transformation of organizations and work processes, as well as current trends in the design of organizational structures, jobs and leadership of contemporary organizations—that is, three analytical planes on which the impact of digitalization may be more disrupting.[2] Performance

management systems and practices used in today's organizations, the ways they assess people's performance at work reflect the changes in the way of performing, managing and organizing work. Thus, their analysis helps to shed light on whether organizations will be likely to leverage digitalization to move towards flat and agile structures demanding knowledge intensive and non- pre-determined working behaviours or, contrarily, if they will be likely to use it to strengthen styles of management and organizational logics based on close surveillance.

The chapter is organized as follows. It begins with a review of the literature and highlights the research hypothesis. Then, it presents the methodology, sample, measures and empirical strategy of the present study. Finally, it shows the results and discusses the implications for theory and practice.

Theoretical Background

Extant literature identifies performance appraisal as one key determinant of innovative work behaviour, that is an individual's behaviour aimed to generate and implement (within a work role, group or organization) new and useful ideas concerning products, services, work processes and procedures (Bednall et al. 2014; de Jong and den Hartog 2010; Janssen 2000). However, knowledge about the critical issue of which performance appraisal criteria are most relevant to IWB is still fragmented. This section presents a review of the literature on the influence of PA criteria on IWB. Moreover, it draws attention on the role of employees' satisfaction towards performance appraisal as a mediator in the relationship between PA criteria and IWB, an issue overlooked by literature.

Performance Appraisal Criteria and Innovative Work Behaviour

There is a common wisdom on the need to adopt other appraisal criteria than time spent in offices and factories, working hours and compliance with procedures, prescribed working behaviours and methods in order to trigger IWB.

Chen and Nath (2005, 2008), CIPD (2014), Schwarzmüller et al. (2018), Staples et al. (1999) argue that organizations should evaluate their employees on the outcomes they achieve as compared to individual performance targets. In so doing, employees can decide how, where and when to do their work on their own and this would encourage their IWB (Bysted and Jespersen 2014; Hammond et al. 2011).

However, there is another stream of literature arguing that appraisals focused on individual results may fail to enhance IWB. Precisely because they focus on short-term outputs, they signal to employees that it is better to retain proven ways of doing things rather than searching for new solutions to problems (Bos-Nehles et al. 2017; Sanders et al. 2018). Thus, in contrast to the emphasis on appraisal focused on the achievement of performance targets, the above scholars call for appraisal systems that reflect employees' competences and ability. In fact, since Amabile's (1983) influential work, knowledge, skills, experience and competences have long been recognized as key determinants of individual-level innovation at work.

Competence-based appraisal can take, at least, two forms. On the one hand, it can focus on the skills employees demonstrate to possess when performing their job. These are skills that individuals already have as part of a previously developed repertoire of response possibilities that can be applied with adaptations to the present work situation. Pulakos and O'Leary (2011) point out that the organizations typically evaluate employees' exhibited skills by comparing them to a pre-defined set of skills associated with the employees' roles. On the other hand, competence-based appraisal can focus on the new competences employees learn on the job, as they search for and discover new appropriate strategies to master complex work process, cooperating and sharing knowledge with their colleagues (Bednall et al. 2014).

Caniëls and Veld (2016) and Shipton et al. (2006) show that the combination of HRM practices focusing on the development of new competences by the employees with those promoting the exploitation of their existing skills have a greater influence on IWB. Except for the above studies, the current debate has almost completely ignored the importance of PA systems combining result and competence-based criteria (*mixed PA systems*) in triggering IWB. Organizations rarely adopt

appraisal systems alternatively based on results, skills or new competences, but more frequently mix them together. Although this latter approach may be effective to improve employee's performance in terms of efficiency, there is no empirical evidence suggesting that the same effect can be expected in terms of IWB.

Given the importance of this issue to academics and practitioners, this study will estimate the relative importance of mixed PA systems as drivers of IWB. Besides, we believe it is worth addressing the topic of whether the relation between PA criteria and IWB is mediated by employees' PA satisfaction.

Employees' Satisfaction with Performance Appraisal as a Mediator

Employees' satisfaction towards PA is one of the indicators most frequently used by practitioners to assess the success of a PA system (Pulakos et al. 2015; Schrage et al. 2019) and also academics are devoting increasing attention to this issue (DeNisi and Pritchard 2006; DeNisi and Sonesh 2011). PA satisfaction is mainly conceptualized in terms of employees' satisfaction with the appraisal system and employees' agreement on their performance ratings (Keeping and Levy 2000).

Research on the factors contributing to PA satisfaction underlines the key role of performance appraisal criteria. Specifically, Pooyan and Eberhardt (1989) show that appraisal alternatively based on skills or results achieved by the employees in their jobs is an important predictor of PA satisfaction for both supervisory and non-supervisory employees. PA satisfaction, in turn, is a key determinant of the acceptance and use of an appraisal system, contributing to its effectiveness. Blau (1999), Ellickson and Logsdon (2002) and Jawahar (2006) show that PA satisfaction relates positively to employees' job satisfaction. It also positively affects individuals' behaviour at work, including IWB (Kuvaas 2006; Ismail and Rishani 2018; Niu 2014).

Accordingly, PA satisfaction may operate as a key mechanism explaining how result or skill-based PA positively influence IWB. Self-determination theory (hereafter SDT) (Gagné and Deci 2005) may help to clarify this linking process.

SDT suggests that aspects of work content and context such as jobs affording discretion to employees and managerial styles allowing them to make decisions, take initiative, solve problems on their own increase job satisfaction thereby encouraging IWB, because they acknowledge employees' competence and support their autonomy. Gagné and Deci (2005) stress that considerably more organization research is needed to explore the aspects of work which positively influence employees' IWB via the mediating role of employees' satisfaction and the present chapter particularly focuses on PA.

Specifically, based on SDT, it may be expected that employees will perceive result-based appraisal as an autonomy supportive form of performance evaluation which increases their job satisfaction and (as part of this) PA satisfaction, thus encouraging their IWB, precisely because it allows employees to decide how to perform their work.

Similarly, it is likely that skill-based appraisal will be experienced as a PA practice emphasizing employees' choice, because it is typically used to evaluate job performance of employees that have discretion over the way to get their work done (Mintzberg 1980). Thus, it meets the necessary condition postulated by SDT in order for PA to encourage IWB, via increased job and PA satisfaction. That is, it not only acknowledges employees' competence; it also allows them to make choices about aspects of their work behaviour rather than pressuring them to behave in specified ways and thus, following SDT, it would support their autonomy as well.

Besides, because employees typically develop new competences by sharing knowledge and cooperating with their colleagues as they search for and discover new appropriate strategies to master complex work situations, they may also perceive new competence-based appraisal as an autonomy supportive PA practice. Thus, it may be expected that where employees are evaluated on the new competences they learn on the job, they will be more likely to be satisfied with their performance appraisal with positive consequences in terms of IWB.

Finally, focusing on mixed PA systems, we expect that they are likely to encourage IWB through the same above-mentioned mechanism (i.e. by increasing job satisfaction and PA satisfaction) because they combine criteria that individually enhance opportunities for employees to take initiative.

On the basis of the previous arguments, we thus hypothesize the following:

Hypothesis 1: PA satisfaction mediates the relationship between: (a) result-based appraisal and IWB; (b) skill-based appraisal and IWB; (c) new competence-based appraisal and IWB; (d) result & skill-based appraisal and IWB; (e) result & new competence-based appraisal and IWB; (f) result & skill & new competence-based appraisal and IWB; (g) skill & new competence-based appraisal and IWB.

The hypothesized model is summarized in Fig. 2.1.

Extant research on PA and on SDT do not provide the information needed to prioritize some of the above forms of PA over others. Therefore, one specific aim of the present study is to explore whether the above PA systems have a differential impact on PA satisfaction.

Method

Sample

We collected data between December 2017 and the end of January 2018 using a non-probabilistic sampling method, namely convenience

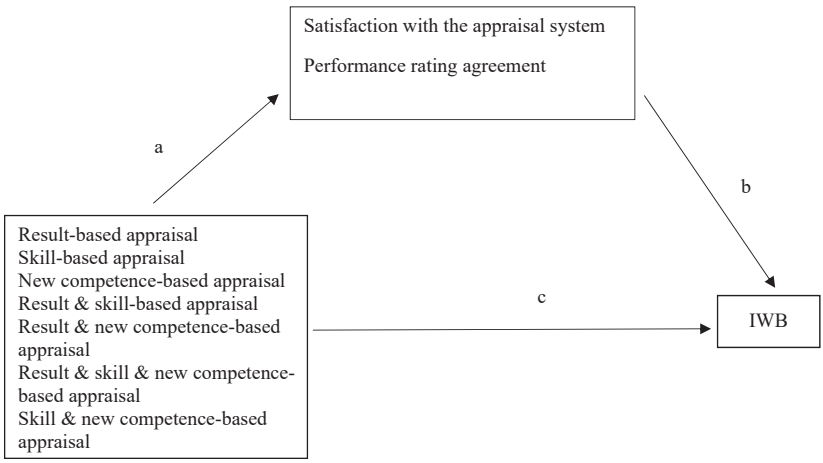

Fig. 2.1 The mediation model (*Source* Authors' own representation)

sampling. An online survey was administered to a sample of 1250 Italian employees of which 865 (69%) reported that their performance was evaluated either formally or informally.

The demographic data shows that among the 865 respondents: 83% are male; 57% are less than 45 years old; 57% have high educational levels (i.e. master degree or doctorate).

Concerning the organizational tenure, 46% of the employees work in the company for more than 10 years. Respondents work in large company with more than 1000 employees (47%); 71% in multinational firms—Italian multinationals with subsidiaries abroad or Italian branches of foreign multinationals; 70% in organizations located in the north of Italy. Most of the respondents belong to firms operating in digitalized sectors (i.e. information and communications technology, including computer, electronic and electrical manufacturing and related services; media; finance and insurance; professional services) and industries with the potential for becoming digitalized (e.g. chemicals and pharmaceuticals; electricity, gas, steam and air conditioning supply; water supply, sewerage, waste management and remediation activities; construction; retail trade; transportation and storage), according to the criteria provided by Gandhi et al. (2016) and McKinsey Global Institute (2016). Specifically, 41% of the employees work in manufacturing and construction while 52% in services. Among the respondents, 45% are managers. Regarding the performance appraisal criteria, only a minority of respondents are evaluated on the so-called "traditional" criteria (i.e. predetermined working behaviours and assigned tasks, time spent in the offices or factories, long working hours and overtime), while the majority (88%) on criteria that are key in contemporary digital transforming organizations. Namely, achieved results, exhibited skills, new competences developed by employees or their combinations.

Measures

IWB. Previous studies show that employees' overall perception of HRM practice effectiveness (i.e. the perceived consistency of HRM practices, the extent to which employees experience that they actually

achieve their intended goals) relates positively to individuals' behaviour at the workplace, specifically to IWB (Bowen and Ostroff 2004; Chang 2005; Sanders et al. 2018). Accordingly, we focus on employees' overall perception that their performance appraisal boosts innovation and creativity at work. Respondents have been asked whether and how performance appraisal affects the generation and implementation of creative ideas at the workplace, with the following possible answers: yes, positively; yes, negatively; no, influence. This categorical variable has been transformed into a dummy variable with 1 = perceived positive influence and 0 = otherwise.

Like De Spiegelaere et al. (2016), Kampkötter (2016) and Shipton et al. (2006), using dummy variables to measure whether employees' performance at work is assessed or the presence of individual and collective performance-related pay schemes (that are connected to result-based performance appraisals), we measure our independent variables as follows.

Result-based appraisal (Results). It is a dummy variable with 1 when employees' performance is only evaluated on the achievement of individual performance targets.

Skill-based appraisal (Skills). It is a dummy variable with 1 when employees' performance is only evaluated on the skills they have exhibited in performing their job.

New competence-based appraisal (New Competences). It is a dummy variable with 1 when employees' performance is only evaluated on the new competences they have developed by performing their work.

Result & skill-based appraisal (Results and Skills). It is a dummy variable with 1 when employees' performance is jointly evaluated on individual achieved results and exhibited skills.

Result & new competence-based appraisal (Results and New Competences). It is a dummy variable with 1 when employees' performance is jointly evaluated on individual achieved results and new-developed competences.

Result & skill & new competence-based appraisal (Results, Skills and New Competences). It is a dummy variable with 1 when employees' performance is jointly evaluated on individual achieved results, exhibited skills and new-developed competences.

Skill & new competence-based appraisal (Skills and New Competences). It is a dummy variable with 1 when employees' performance is jointly evaluated on exhibited skills and new-developed competences.

Based on Keeping and Levy's (2000) study, we consider the following dimensions to measure employees' satisfaction towards their performance appraisal.

Satisfaction with the appraisal system. Respondents have been asked to express the level of satisfaction with the way their performance appraisal was conducted on a 4-point scale ranging from 1 (not at all) to 4 (very satisfied). This categorical variable has been transformed into a dummy variable with 1 when workers are enough or very satisfied (i.e. levels 3 and 4 of the scale).

Performance rating agreement. Respondents have been asked to express their agreement on their performance ratings using a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). This categorical variable has been transformed into a dummy variable with 1 when workers are quite or strongly agreed (i.e. levels 3 and 4 of the scale).

Control variables. Following Bos-Nehles and Veenendaal (2017), De Spiegelaere et al. (2016), Kuvaas (2006), Pooyan and Eberhardt (1989), Sanders et al. (2018), we control for the following employees' and organizational characteristics: job position, age, educational level, organizational tenure, gender, company's department (i.e. R&D), firm's size, sector, geographical location and whether the firm is or belongs to a multinational. All these characteristics are measured as dummy variables.

Empirical Strategy

In the following, we analyse a mediation model involving the above-mentioned non-traditional PA criteria as predictors of the employees' IWB and satisfaction with the appraisal system and employees' agreement on their performance ratings as mediators.

To this aim, we follow the procedure proposed by Baron and Kenny (1986). Firstly, we evaluate the relationship between the PA criteria and employees' satisfaction with the appraisal system and agreement on their

performance ratings (*Path a* in Fig. 2.1). Secondly, we account for the influence of satisfaction with the appraisal system and agreement on performance ratings (the mediators in our analysis) on employees' IWB (*Path b* in Fig. 2.1). Finally, we assess the relationship between the PA criteria and employees' IWB once the mediators, satisfaction with the appraisal system and performance rating agreement are also entered into the analysis (*Path c*—the effect of the independent variables controlling for the mediators).

To estimate the mediation model above, we use logit analysis given that the dependent variable IWB is binary. We assess the variance inflation factor (VIF) of each independent variable in order to check for multicollinearity (Cohen et al. 2003). In addition, marginal effects are derived at the means (MEM) of each independent variable and used to evaluate their influence on the dependent variable. To conduct this statistical analysis, we use SPSS.

Results

The control variables are scarcely significant in all the specifications in Tables 2.1 and 2.2: they explain the 4% of appraisal system satisfaction or performance rating agreement and the 3% of the IWB. The job position (i.e. managerial role) positively affects both appraisal system satisfaction and performance rating agreement increasing the likelihood by 17% ($p \leq 0.01$) and 13% ($p \leq 0.01$) respectively. In contrast, female employees are less likely to be satisfied with the appraisal system (MEM $= -12\%$, $p \leq 0.05$). In addition, the younger employees (aged up to 44 years old), are more likely to agree on their performance ratings (MEM ranges from 16 to 22%, $p \leq 0.01$). On the other hand, employees aged 45–54 are less likely to perceive that their PA boosts IWB (MEM ranges between -11 and -14%, $p \leq 0.05$). In contrast, the manufacturing and construction sectors and firm size (51–250) increase this probability, around 8% (prevailing $p \leq 0.05$) and nearly 11% ($p \leq 0.05$) respectively.

Table 2.1 refers to *Path a* in Fig. 2.1 and shows the estimated relationship between the PA criteria and employees' satisfaction with the

Table 2.1 Results of a logit regression model with satisfaction with the appraisal system and performance rating agreement as dependent variables (DV)

Independent variables	DV: Satisfaction with the appraisal system		DV: Performance rating agreement	
	Model 1	Model 2	Model 3	Model 4
Controls				
Manufacturing and construction sectors	0.013	0.02	0.039	0.049
Firm size up to 50	0.110*	0.126*	0.013	0.007
Firm size 51–250	0.064	0.062	0.086*	0.080*
Firm size 251–1000	−0.007	0.021	−0.037	−0.022
Geographical location: north	0.049	0.035	0.043	0.027
Multinational company	0.001	−0.047	0.027	−0.009
Age 18–34	0.124	0.156*	0.201***	0.222***
Age 35–44	0.114*	0.127*	0.149***	0.156***
Age 45–54	−0.010	0.027	0.041	0.071
Tenure 0–5	0.060	0.072	0.032	0.034
Tenure over 10	−0.089	−0.092*	−0.046	−0.047
Educational level: low	0.034	0.029	0.021	0.011
Educational level: medium	0.014	−0.024	0.011	−0.023
Female	−0.111***	−0.118**	−0.054	−0.053
Manager	0.195***	0.174***	0.155***	0.132***
R&S	−0.044	−0.049	−0.035	−0.037
Performance appraisal criteria				
Results		0.349***		0.229***
Skills		0.253***		0.178***
New Competences		0.339***		0.210***
Results and Skills		0.461***		0.294***
Results and New Competences		0.474***		0.287**
Results, Skills and New Competences		0.431***		0.258***
Skills and New Competences		0.335***		0.239***
VIF < 10: no collinearity	VIF < 2.2	VIF < 2.4	VIF < 2.2	VIF < 2.4
McFadden *R*-squared	0.043	0.119	0.045	0.115
Log Likelihood	−573.699	−528.179	−509.812	−472.299

Note ***($p \leq 0.01$), **($p \leq 0.05$), * ($p \leq 0.10$). Observations = 865
Source Our work

Table 2.2 Results of a logit regression model with innovative work behaviour as dependent variable

Independent variables	Model 1	Model 2	Model 3	Model 4
Controls				
Manufacturing and construction sectors	0.078**	0.086**	0.077*	0.082**
Firm size up to 50	0.026	0.034	0.0004	0.009
Firm size 51–250	0.120**	0.122**	0.105**	0.109**
Firm size 251–1000	0.003	0.015	0.011	0.015
Geographical location: north	−0.018	−0.029	−0.038	−0.041
Multinational company	−0.043	−0.063	−0.053	−0.057
Age 18–34	0.025	0.030	−0.039	−0.038
Age 35–44	0.019	0.012	−0.032	−0.038
Age 45–54	−0.123**	−0.109**	−0.141**	−0.135**
Tenure up to 5	0.065	0.066	0.052	0.051
Tenure over 10	0.015	0.020	0.048	0.049
Educational level: low	0.073*	0.065	0.071	0.064
Educational level: medium	−0.039	−0.065	−0.048	−0.063
Female	−0.035	−0.035	−0.001	−0.005
Manager	0.108***	0.092**	0.047	0.044
R&S	−0.021	−0.028	−0.006	−0.015
Performance appraisal criteria				
Results		0.107*		−0.0003
Skills		0.092		0.0140
New Competences		0.106		−0.020
Results and Skills		0.203***		0.060
Results and New Competences		0.265***		0.110
Results, Skills, and New Competences		0.263***		0.125
Skills and New Competences		0.253**		0.159
Mediators				
Performance rating agreement			0.146***	0.135***
Satisfaction with the appraisal system			0.245***	0.233***
VIF < 10: no collinearity	VIF < 2.1	VIF < 2.3	VIF < 2.2	VIF < 2.5
McFadden *R*-squared	0.031	0.052	0.105	0.109
Log Likelihood	−580.165	−567.748	−536.370	−533.400

Note ***($p \leq 0.01$), **($p \leq 0.05$), *($p \leq 0.10$), Observations = 865
Source Our work

appraisal system (see Model 2 in Table 2.1) and employees' agreement on their performance ratings (see Model 4 in Table 2.1). Specifically, Models 2 and 4 suggest that all the non-traditional PA criteria are

significant determinants of both the satisfaction with the appraisal system and performance rating agreement (with $p \leq 0.01$ and $p \leq 0.05$). In other words, workers assessed with these criteria are more likely to be satisfied with the appraisal system and to agree on their performance ratings compared to workers subject to traditional evaluations (e.g. time spent in the office, long working hours, compliance with pre-determined working behaviours). The likelihood to be satisfied ranges from 25% for workers evaluated for their Skills to 47% if the appraisal system is based on Results and New Competences, while when the performance rating agreement is considered, the probability ranges from 18% for Skill-based appraisal and 29% for Results and Skills as well as for Results and New Competences. Compared to employees subject to appraisal focused alternatively on Results or Skills or New Competences, workers are more likely to be satisfied with the appraisal system when their performance is evaluated based on mixed criteria (e.g. Results and New Competences). In this case, the likelihood is always greater than 40% (see Model 2 in Table 2.1).

Table 2.2 outlines the influence of appraisal system satisfaction and employees' agreement on their performance ratings (the mediators in our analysis, *Path b* in Fig. 2.1) on IWB (see Model 3 in Table 2.2). The results show that both mediators increase the likelihood that employees perceive performance appraisal as a booster of IWB. Precisely, the satisfaction with the appraisal system increases this likelihood around 25% ($p \leq 0.01$), while the performance rating agreement around 15% ($p \leq 0.01$). Finally, Model 4 depicts the relationship between the PA criteria and the employees' IWB once the mediators (satisfaction with the appraisal system and performance rating agreement) are also entered into the analysis (*Path c* in Fig. 2.1—the effect of the independent variables controlling for the mediating effects). The result highlights that when the mediators are taken into account in the logit model (see Model 4, Table 2.2) the PA criteria do not impact significantly on IWB, while the influence of satisfaction with the appraisal system and performance rating agreement on IWB remains highly significant and similar in terms of magnitude of the likelihoods (MEM respectively equal to 23 and 14%, $p \leq 0.01$). In other terms, the various non-traditional criteria affect the employees' perception that their PA promotes IWB by

increasing their satisfaction with the appraisal system and their agreement with their performance ratings (total mediation).

Discussion and Conclusion

The digital transformation of work has recently rekindled the long-standing debate about the effectiveness of PA and its ability to foster innovative behaviours at the workplace. The present study adds to this debate in four distinct ways.

Firstly, a novel contribution of this study is the analysis of employees' PA satisfaction as a mediator in the relationship between non-traditional PA criteria and IWB. Extant literature underlines that PA systems focused on results, skills and personnel development encourage employees' IWB, but the mechanisms and linking processes through which such a positive effect occurs have remained a black box. The present work addresses this issue, by showing that PA systems based on results, skills and new competences as well as on mixed criteria positively affect employees' satisfaction with the appraisal system and their performance rating agreement, which in turn are key factors affecting the PA-IWB linkages as perceived by employees. Employees who are satisfied with the appraisal system and agree on their performance ratings are more likely to report that their performance appraisal enhances the generation and implementation of creative ideas at the workplace.

Secondly, our findings underscore the greater importance of result and competence-based PA systems as well as of mixed PA systems compared to traditional forms of performance evaluation. More specifically, they show that employees evaluated on achieved results, exhibited skills, new-developed competences or a combination of these criteria are more likely to be satisfied with the appraisal system, to agree on their performance ratings and therefore to perceive that PA encourages their IWB than employees evaluated on time spent at the workplace, working hours and assigned tasks. This outcome adds to existing research on the link between PA and IWB, providing further empirical evidence that individual-level innovation at work requires a radical change of PA

criteria and namely a stronger focus on employees' results, skills and new competences.

The third contribution concerns the analysis of the relative importance of PA combining result, exhibited skill and new-developed competence-based criteria. Our findings show that mixed PA systems are more likely to increase the employees' PA satisfaction and therefore their perception that PA relates positively to IWB than systems only focused on results or skills or new-developed competences. We argue this to be an important contribution to extant research that has paid no attention to mixed PA systems, even though these are the most widespread in practice, contributing to the research-practice divide in the field of HRM and specifically of PA (Markoulli et al. 2017). The present study is among the first to attempt to fill this gap, also showing that the mixed PA systems with the strongest positive effect on employees' PA satisfaction are those focused on the employees' achieved results and new-developed competences.

Finally, we show that skill-based PA is less effective in enhancing the employees' satisfaction with the appraisal system and performance rating agreement, and thus in encouraging their IWB than result or new-developed competence-based PA. An almost similar effect emerges when we compare PA focused on results and new-developed competences with the other mixed PA systems, which also consider the employees' exhibited skills. These findings are unexpected and contrast with the hypotheses drawn from SDT. The latter theory suggests that job satisfaction and PA satisfaction positively correlate with aspects of work (e.g. PA systems) that enhance employees' autonomy. It is worth noting that SDT relies on Job Characteristics Theory (Hackman and Oldham 1975, 1976, 1980) to formulate hypotheses about the so-called autonomy-supportive aspects of work, thereby equating discretion with autonomy. On this basis, given that standard practice of evaluating exhibited skills affords discretion to the employees,[3] we expected that skill-based PA and mixed PA systems that also evaluate skills were just as likely to be perceived as autonomy supportive, and thus to enhance employees' PA satisfaction and IWB, as PA based on results or new-developed competences or both. However, our findings fail to confirm this hypothesis. A possible explanation of this result is provided by

Maggi's (2003/2016) study that, unlike SDT and Job Characteristics Theory, analytically distinguishes discretion from autonomy. This helps clarifies that employees who are given discretion actually are required to choose how, when and where to perform their job, by selecting from a set of alternatives that are not determined by the employees themselves, thus enjoying no autonomy. On this basis, we can also speculate that employees in our sample are more likely to be satisfied with PA focused on results and/or new-developed competences and to perceive these as more strongly positively related to their IWB because these systems open up real opportunities for them to exercise genuine autonomy.[4] This is definitely a preliminary hypothesis and future research is needed to explore this issue.

The contributions of this study should be viewed in light of some limitations which lead to opportunities for future research. First, we used a single item, binary measure to operationalize the employees' overall perception of performance appraisal as a driver of IWB. Some scholars have stressed that single-item measures offer the important advantages of being easier to understand than multi-item scales, not monotonous to complete and less time consuming, thus reducing response biases (Wanous et al. 1997). Nonetheless, it could be interesting to replicate this study using multiple-item and more informative scales (e.g. 5 or 7-point Likert scales) to measure employees' IWB. In addition, similarly to many other studies of IWB, we used self-reported data collected at a single moment in time from a single respondent. Consequently, reverse causality and common-method bias might be issues. Future research could address these points by adopting a longitudinal research design and gathering additional data on employees' IWB and/or PA criteria from other sources (e.g. supervisors). Finally, this study is based on convenience sample that may be not representative of the larger working population in Italy. Therefore, future investigations employing randomly selected samples seem warranted.

Despite these limitations, this work may have some interesting implications for managers. To begin, our findings suggest that organizations wishing to encourage individual-level innovation at work should design and implement PA systems that increase employees' satisfaction with performance appraisal. To this end, organizations should adopt mixed

PA systems, specifically those focused on the results as well as on the new competences that employees develop as they search for and experiment with new operational strategies to master their work or creative solutions to problems, by cooperating and sharing knowledge with their colleagues. This means that organizations should gradually abandon standard practice in which HRM managers and senior leaders predetermine in a top-down way that is disconnected from the daily work activities the skills employees need to perform their work in order to maximize their chances of boosting employees' PA satisfaction and IWB.

Notes

1. Specifically, the Italian survey on the quality of work carried out by the Istituto Nazionale per l'Analisi delle Politiche Pubbliche (INAPP) since 2002, the European Company Survey and the European Working Conditions Survey carried out by the European Foundation for the Improvement of Living and Working Conditions (Eurofound) since 1990/1991 and 2004/2005 respectively.
2. In fact, the latest generation of information and communication technologies makes it possible to manage increasing complexity and cope with unexpected problems (contingencies) when and where they arise, thereby making tall structures no longer necessary. Moreover, they allow employees to work anytime and anywhere. They also offer new opportunities either to reduce or to strengthen direct control over the ways workers perform their job.
3. As mentioned above, the skills the employees exhibit as they accomplish their work are typically evaluated by comparing them to the pre-set skills related to their roles. In so doing, employees are asked to leverage the skills included in their role description to decide how, when and where to perform their job at their discretion.
4. Research in other domains (Terssac 1992, 2011) indeed shows that the development of new competences by the employees is inherent to the situations in which they cooperate and share knowledge with their colleagues to *autonomously* identify new operational strategies to master complex work processes and to search for and experiment with new and creative solutions to problems.

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3

Wage Discrimination by Gender and Performance Evaluation

Tindara Addabbo

Introduction

Performance pay systems have been increasingly used in European countries (Bryson et al. 2013; Boeri et al. 2013). The scope of this paper is to deepen the analysis on the probability of being at least in part under performance pay evaluation systems and on the different exposure of employed men and women to these schemes. In this Section we introduce the literature on performance pay scheme effects on gender wage gap, we then present in sect. "The Models", the models that we estimate to provide answers to our research questions. The data set used to carry out the estimation are presented in sect. "The Data" and results of our application are discussed in sect. "Results", while sect. "Conclusions" presents some concluding remarks.

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_3

Evidence of Performance pay (when employees' pay is linked in some way to individual or collective performance PP) impact in increasing wage dispersion by gender has been provided among others by Bryan and Bryson (2016) by using British Household Panel Survey data and by Lemieux et al. (2009) by using Panel of Income Dynamics for the USA. Bryan and Bryson (2016) analyse the impact of PP on the overall **wage distribution** in Great Britain. They highlight how an increase in wage dispersion can occur related to PP:

- Since it can reveal differences in individuals' productivity otherwise hidden
- Since it can provide an increase in effort
- Since PP jobs can attract those employees with the higher productivity.

De La Rica et al. (2010) analyse the diffusion of PP and its outcomes. They analyse the extent to which the gender gap in performance-pay differs from the gender gap in the other components of pay, finding a higher gender gap in PP than the gender gap in non-PP compensation with evidence of the occurrence of glass-ceiling effect with higher gaps and lower women's participation in the higher part of the performance-pay distribution.

Chiang and Ohtake (2014) use the Japanese Survey of Living Preferences and Satisfaction to compare gender gap in performance and non-performance based pay. They found greater raw gender wage gap for PP employees and that, applying the **Machado and Mata counterfactual decomposition analysis**, one can see how for non-performance pay employees the difference observed at the top of the distribution can be related to differences in promotion while for performance paid employees the gender gap is explained by the lower presence of PP women employees in large firms.

A positive effect of performance pay on high wage workers is only found to hold for men in New Zealand by Fabling et al. (2012) an effect that seems related to the constrained access for women to high pay jobs where also PP can be accessible.

Manning and Saidi (2010) use the 1998 and 2004 British Workplace Employment Relations Survey and the information on the existence of performance pay schemes (a broad indicator since the survey that includes also piece-rates schemes) in the plant to judge the degree of competitiveness of the working environment. They analyse also the sensitiveness of the probability of being in a working environment with performance pay schemes to the inclusion of different sets of personal and **job characteristics** finding evidence that women are less likely than men to be in performance pay contracts but with a lower gap than shown in the experimental literature on the gender gap in working in competitive environments.

We will analyse this effect with special attention to gender pay gap by estimating wage equations by gender and using Oaxaca-Blinder decomposition to detect the contribution of different performance pay schemes to the observable gender gap in pay.

To carry out our analysis we use the 6th European Working Conditions survey since it provides information on wages, working conditions and systems of pay evaluation.

The Models

In order to estimate the probability of having at least part of the wage linked to one's performance we estimate a **Probit model**[1]:

$$\text{Prob}\ (Y_i = 1) = \Pr\left(Y_i^* > 0\right) = \Phi x_i^T \beta \tag{3.1}$$

$$\text{Prob}\ (Y_i = 0) = \Pr\left(Y_i^* <= 0\right) = 1 - \Phi x_i^T \beta \tag{3.2}$$

$\Phi x_i^T \beta$ is the standard normal cumulative distribution function.

Where Y^* is the latent variable and Y_i is the observed realization of the i employee having at least part of the pay based on his/her performance, Y_i takes the value of 1 when the realization occurs and 0 otherwise (if the employee pay is not related to performance). We have also evaluated the marginal effect of each explanatory variables at

their sample means to measure their effect on the probability of having access to any form of performance pay (at least for part of the wage).

We have then turned to the estimation of the impact of having different forms of performance pay scheme on wages with the purpose of analysing the impact on the gender pay gap.

For this purpose we have estimated wage equations by gender with OLS regressions models and computed the **Oaxaca-Blinder (OB) decomposition**.[2]

$$\text{Log wage}_{mi} = \beta_0 + \mathrm{x}'_{mi}\beta_m + \varepsilon_m \tag{3.3}$$

$$\text{Log wage}_{fi} = \beta_0 + \mathrm{x}'_{fi}\beta_f + \varepsilon_f \tag{3.4}$$

$$\mathrm{E}\left[\text{Log wage}_{mi}\right] - \mathrm{E}\left[\text{Log wage}_{fi}\right] = \mathrm{x}'_{mi}\left(\beta_m - \beta_f\right) + \left(\mathrm{x}_{mi} - \mathrm{x}_{fi}\right)'\beta_f \tag{3.5}$$

wage_{mi} = hourly net wage for the i^{th} male employee
wage_{fi} = hourly net wage for the i^{th} female employee
x_{mi} = set of variables included in the model as affecting wages distribution for men
β_m = return of each individual male employee's variables in terms of estimated wages
ε_m = error term including also unobservable that can affect wage distribution but are not included in the set of data used and in the wage equation for men
x_{fi} = set of variables included in the model as affecting wages distribution for women
β_f = return of each individual female employee's variables in terms of estimated wages
ε_f = error term including also unobservable that can affect wage distribution but are not included in the set of data used and in the wage equation for women

$x'_{mi}(\beta_m - \beta_f)$ is the unexplained part of the decomposition in the literature attributed to discrimination $(x_{mi} - x_{fi})'\beta_f$ is the explained part of **OB decomposition** attributed to differences in the observed characteristics.

We then proceed with analysing the contribution of each variable in the wage equation to the explained and unexplained part of the wage gap with special interest to the variables on the different types of performance pay systems.

The Data

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) collects information on the working conditions in European countries since 1991 by means of the **European Working Conditions Survey** (EWCS) that collects information on individual workers' working conditions together with sociodemographic variables allowing to analyse their determinants across European countries.

In this study we use the latest available microdata: the sixth EWCS survey run in 2015 across 44,000 employees and self-employed individuals in 35 European countries including 28 EU members, 5 EU candidate countries plus Norway and Switzerland (European Foundation for the Improvement of Living and Working Conditions 2017a).

The survey is particularly rich in terms of individuals' perception of their **working conditions** including different dimensions. The employee payment system is included in the set of available information in reply to a question on the system of payment whether a basic fixed salary or wage or including additional components of a variable nature that allow to analyse the probability to receive pay related to performance and to investigate further the effect of different systems of performance pay on individual wages and on the gender pay gap. Earnings are provided on a net monthly base and hourly wage can be computed using the information on weekly working hours.

Results

In **performance pay evaluation systems**, the variable part of wages can relate to individual or collective performance and be explicitly linked to the production or service performance or by applying qualitative criteria to other outcomes of performance (like qualifications or attitude) that cannot be expressed in terms of productivity.

The heterogeneity of the systems of performance pay is reflected in the data collected within EWCS 2015 data. EWCS collects information on extra components of pay (for overtime, for Sunday work, for dangerous working conditions) and system of pay, fixed or variable:

- Basic fixed salary/wage
- **Piece rates or productivity payments** (where employee's pay is related to an objective measure of individual output)
- Payments based on individual performance (collected for the first time in 2015 EWCS)
- Payments based on the performance of employee's team/working group/department
- Payments based on the overall performance of the company (profit sharing scheme) where the employee works
- Income from shares in the company the employee works for
- Advantages of other nature (for instance medical services, access to shops, etc.)

European Foundation for the Improvement of Living and Working Conditions (2017a) provides a time-series on that system of performance-related pay whose information have been collected since 2000. Eurofound data (2017, Figure 89, p. 99) show an increase in income from shares from 2000 to 2015 though it was the least spread type of performance-related pay within EU-28 employees. Profit sharing schemes increased steadily from 2000 to 2010 for then reducing the path of growth in the following 5 years during the Great Recession. Since 2005, piece rate/productivity payments fell becoming the third type of performance-related pay in year 2015 when the available information collected for the first time on pay based on individual

Table 3.1 Different systems of pay employees only by gender

	Total sample			
	M		F	
	Mean	S.D.	Mean	S.D.
Basic fixed salary/wage	0.95	0.21	0.96	0.19
Piece rate or productivity payments	0.14	0.35	0.09	0.29
Payments based on your individual performance	0.18	0.39	0.14	0.35
Payments based on the performance of your team/working group/department	0.11	0.32	0.07	0.26
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.15	0.35	0.09	0.29
Income from shares in the company you work for	0.04	0.20	0.02	0.14
Advantages of other nature (for instance medical services, access to shops, etc.)	0.08	0.28	0.07	0.26
Obs.	14,531		12,944	

Source Our elaborations on the 6th European Working Conditions survey microdata, European Foundation for the Improvement of Living and Working Conditions (2017b)

performance showed the latter to be the more spread type of performance-related pay among EU-28 employees.

We have then included the whole set of countries to analyse the diffusion of different systems of pay by gender (Table 3.1). Both men and women employees are more characterized by a system of basic fixed salary/wage (95% of men and 96% of women who are employees) than by variable pay systems. Women are less present in all types of performance pay systems with a larger gap with respect to male employees in payment based on the overall performance of the company (15% men and 9% women); piece rate or productivity payments (9% of women employees against 14% of men employees) and in systems based on the team performance (11% men, 7% women).

Turning to the distribution of the different **systems of pay** by level of education and **gender**, one can see how performance pay systems are more spread among the higher educated (with diploma, degree or over) confirming the gender gap shown by the lower presence among women and in some cases showing also a higher gender gap (as for payments based on the overall performance of the company) (Table 3.2).

Table 3.2 Different systems of pay employees only by gender and level of education

	Lower educated				Higher educated			
	M		F		M		F	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Basic fixed salary/wage	0.94	0.24	0.94	0.23	0.96	0.20	0.97	0.18
Piece rate or productivity payments	0.14	0.35	0.10	0.30	0.14	0.35	0.09	0.29
Payments based on your individual performance	0.10	0.30	0.07	0.26	0.20	0.40	0.15	0.36
Payments based on the performance of your team/working group/department	0.06	0.24	0.05	0.21	0.13	0.33	0.08	0.27
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.08	0.27	0.05	0.22	0.16	0.37	0.10	0.29
Income from shares in the company you work for	0.02	0.15	0.02	0.14	0.04	0.20	0.02	0.14
Advantages of other nature (for instance medical services, access to shops, etc.)	0.07	0.26	0.06	0.23	0.09	0.28	0.07	0.26
Obs.	2482		1509		12,002		11,417	

Source Our elaborations on the 6th European Working Conditions survey microdata, European Foundation for the Improvement of Living and Working Conditions (2017b)

In Nordic European countries the gender gap in the diffusion of Performance pay system is lower and even disappears in payments based on individual performance (Table 3.3).

Probability of Performance-Related Payments

The first aim of our analysis consists in analysing the factors related with the probability of having at least part of the pay related to performance. To answer this question we have estimated different Probit models on

Table 3.3 Different systems of pay employees only by gender and country of residence

	Continental				Nordic			
	M		F		M		F	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Basic fixed salary/wage	0.99	0.11	0.99	0.12	0.96	0.19	0.98	0.13
Piece rate or productivity payments	0.08	0.27	0.03	0.17	0.11	0.31	0.06	0.24
Payments based on your individual performance	0.18	0.38	0.13	0.33	0.22	0.41	0.22	0.41
Payments based on the performance of your team/working group/department	0.11	0.31	0.06	0.23	0.12	0.32	0.07	0.25
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.19	0.39	0.10	0.30	0.20	0.40	0.11	0.31
Income from shares in the company you work for	0.05	0.22	0.02	0.15	0.05	0.22	0.02	0.13
Advantages of other nature (for instance medical services, access to shops, etc.)	0.14	0.35	0.14	0.35	0.15	0.36	0.13	0.34
Obs.	3362		2310		1808		1482	
	Baltic				Southern European			
	M		F		M		F	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Basic fixed salary/wage	0.84	0.37	0.91	0.28	0.95	0.22	0.95	0.22
Piece rate or productivity payments	0.31	0.46	0.17	0.37	0.15	0.36	0.10	0.30
Payments based on your individual performance	0.26	0.44	0.18	0.38	0.11	0.31	0.07	0.25
Payments based on the performance of your team/working group/department	0.24	0.43	0.15	0.36	0.06	0.24	0.03	0.18
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.20	0.40	0.12	0.32	0.06	0.23	0.04	0.20
Income from shares in the company you work for	0.03	0.18	0.02	0.12	0.03	0.16	0.02	0.12
Advantages of other nature (for instance medical services, access to shops, etc.)	0.07	0.25	0.06	0.23	0.04	0.21	0.05	0.21
Obs.	851		1256		3635		2757	

(continued)

Table 3.3 (continued)

	Central Eastern				Anglo-Saxon			
	M		F		M		F	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Basic fixed salary/wage	0.95	0.21	0.97	0.18	0.96	0.19	0.98	0.16
Piece rate or productivity payments	0.18	0.38	0.12	0.32	0.07	0.25	0.05	0.21
Payments based on your individual performance	0.22	0.41	0.16	0.37	0.19	0.40	0.11	0.32
Payments based on the performance of your team/working group/department	0.13	0.34	0.09	0.29	0.12	0.33	0.08	0.27
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.15	0.35	0.10	0.30	0.18	0.38	0.09	0.29
Income from shares in the company you work for	0.03	0.17	0.02	0.15	0.07	0.26	0.04	0.19
Advantages of other nature (for instance medical services, access to shops, etc.)	0.05	0.22	0.04	0.21	0.06	0.24	0.03	0.18
Obs.	4012		4506		863		629	

the different types of performance payments observed in EWCS in 2015 having also the possibility, for the first time in the EWCS survey, to be able to disentangle also performance pay based on individual performance and restricting the analysis to the employees.

The multivariate analysis controls for gender, age, level of education (lower than diploma as reference category), seniority, **type of contract** (full-time permanent as reference category), firm size (increasing in firm's dimension), profession (white-collar as reference category), sector (manufacturing as reference category), country (Nordic countries as reference category).

As the estimated coefficients and marginal effects show, women have less access to any form of performance-based pay, the probability of having performance-related payments increases with the level of education while seniority has a positive effect only on the occurrence of performance based on firm overall performance. Performance pay related to individual, team or firm performances increases with firm size more than **piece rate** or productivity payments. Having a temporary contract reduces by 2% the probability of having one's pay related to firm performance, by 1% related to team, and by 3% related to individual performance while it does not affect the probability of having piece rate or productivity-based payments. Turning to part-time work with respect to full-time permanent contract the probability of having one's pay related to firm overall performance or to team/department or working group performance decreases for part-timers by 1%, by 3% for individual performance-related payments and increases by 1% for piece rate or productivity payments (Table 3.4).

Turning to the type of professions consistently with the literature managers are more likely to have their pay related to firm overall performance (9% more), team (8%), individual (11%), while professionals have a higher probability with respect to white-collar employees to have firms or individual performance-related pay by 2 and 4% respectively and technicians have a higher probability of receiving performance-related pay and piece rate or productivity payments. The latter form of payment is more spread among skilled agriculture workers, craft workers, plant operators and elementary positions.

Turning to employment sectors financial and insurance employees are more likely to have performance-related pay especially based on **individual performance** (+10%) while any forms of performance-related payments

Table 3.4 Probability of performance payments—2015

	Performance based on firm overall perform		Performance based on team/ wg/dept		Performance based on individual perform.		Piece rate or productivity paym.	
Variables	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal
Age	0.0317***	0.00488***	0.0149**	0.00201**	0.0113*	0.00246*	0.00305	0.000519
	(0.00736)	(0.00113)	(0.00746)	(0.00101)	(0.00636)	(0.00139)	(0.00685)	(0.00117)
Age squared	−0.000417***	−6.43e−05***	−0.000223**	−3.02e−05**	−0.000146*	−3.19e−05*	−6.93e−05	−1.18e−05
	(8.68e−05)	(1.34e−05)	(8.72e−05)	(1.18e−05)	(7.53e−05)	(1.64e−05)	(8.08e−05)	(1.38e−05)
Female	−0.192***	−0.0295***	−0.169***	−0.0229***	−0.153***	−0.0334***	−0.183***	−0.0311***
	(0.0261)	(0.00406)	(0.0276)	(0.00378)	(0.0233)	(0.00510)	(0.0263)	(0.00449)
Diploma	0.132***	0.0205***	0.170***	0.0232***	0.160***	0.0349***	0.110***	0.0189***
	(0.0405)	(0.00628)	(0.0423)	(0.00578)	(0.0367)	(0.00803)	(0.0362)	(0.00620)
Degree	0.281***	0.0456***	0.291***	0.0418***	0.310***	0.0706***	0.0917**	0.0159**
	(0.0463)	(0.00789)	(0.0484)	(0.00736)	(0.0417)	(0.00988)	(0.0441)	(0.00776)
Temporary	−0.136***	−0.0195***	−0.109***	−0.0139***	−0.145***	−0.0297***	−0.0113	−0.00191
	(0.0420)	(0.00559)	(0.0424)	(0.00508)	(0.0360)	(0.00692)	(0.0360)	(0.00607)
Part-time	−0.0695*	−0.0104*	−0.103***	−0.0133***	−0.159***	−0.0326***	0.0614*	0.0107*
	(0.0374)	(0.00538)	(0.0392)	(0.00477)	(0.0334)	(0.00642)	(0.0345)	(0.00620)
Seniority	0.00428***	0.000660***	0.00219	0.000296	0.000366	7.98e−05	−0.00241	−0.000410
	(0.00153)	(0.000235)	(0.00159)	(0.000215)	(0.00140)	(0.000305)	(0.00152)	(0.000259)
Firm size	0.200***	0.0308***	0.208***	0.0282***	0.151***	0.0329***	0.0392**	0.00667**
	(0.0178)	(0.00271)	(0.0183)	(0.00247)	(0.0154)	(0.00334)	(0.0166)	(0.00282)
Armed force	−0.0664	−0.00976	0.212	0.0333	0.342**	0.0885*	−0.839***	−0.0804***
	(0.290)	(0.0407)	(0.194)	(0.0350)	(0.167)	(0.0498)	(0.224)	(0.00930)
Managerial	0.444***	0.0884***	0.431***	0.0763***	0.404***	0.105***	0.100*	0.0181
	(0.0504)	(0.0124)	(0.0549)	(0.0121)	(0.0488)	(0.0148)	(0.0592)	(0.0113)
Professional	0.144***	0.0235***	0.0830	0.0117	0.170***	0.0392***	0.0695	0.0122
	(0.0468)	(0.00811)	(0.0509)	(0.00741)	(0.0427)	(0.0104)	(0.0503)	(0.00904)
Technician	0.108**	0.0175**	0.153***	0.0225***	0.236***	0.0562***	0.112**	0.0200**
	(0.0446)	(0.00761)	(0.0492)	(0.00777)	(0.0409)	(0.0106)	(0.0488)	(0.00920)

(continued)

Table 3.4 (continued)

	Performance based on firm overall perform		Performance based on team/ wg/dept		Performance based on individual perform.		Piece rate or productivity paym.	
Variables	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal
Sales workers	−0.161***	−0.0231***	−0.0113	−0.00152	0.0352	0.00777	0.0494	0.00859
	(0.0473)	(0.00628)	(0.0510)	(0.00683)	(0.0424)	(0.00948)	(0.0465)	(0.00826)
Skilled agr.	−0.101	−0.0146	0.156	0.0235	0.0848	0.0193	0.284**	0.0576**
	(0.141)	(0.0189)	(0.143)	(0.0240)	(0.122)	(0.0291)	(0.123)	(0.0289)
Craft worker	−0.196***	−0.0271***	−0.0191	−0.00256	−0.0470	−0.0100	0.274***	0.0537***
	(0.0529)	(0.00650)	(0.0559)	(0.00739)	(0.0498)	(0.0104)	(0.0524)	(0.0116)
Plant opert.	−0.186***	−0.0258***	−0.124**	−0.0156**	−0.0218	−0.00470	0.275***	0.0539***
	(0.0526)	(0.00653)	(0.0572)	(0.00666)	(0.0497)	(0.0106)	(0.0519)	(0.0115)
Elementary	−0.208***	−0.0286***	−0.134**	−0.0168**	−0.115**	−0.0238**	0.121**	0.0219**
	(0.0563)	(0.00683)	(0.0597)	(0.00689)	(0.0506)	(0.00994)	(0.0518)	(0.00993)
Agriculture	−0.0596	−0.00882	−0.107	−0.0135	0.0392	0.00872	0.148*	0.0275
	(0.0974)	(0.0138)	(0.101)	(0.0117)	(0.0891)	(0.0202)	(0.0882)	(0.0179)
Fishing	−0.0175	−0.00266	−0.110	−0.0137	−0.555	−0.0868	0.0941	0.0170
	(0.398)	(0.0598)	(0.460)	(0.0526)	(0.523)	(0.0531)	(0.406)	(0.0778)
Mining	−0.0281	−0.00425	0.245*	0.0395	−0.0496	−0.0105	−0.120	−0.0189
	(0.157)	(0.0233)	(0.139)	(0.0262)	(0.138)	(0.0285)	(0.158)	(0.0229)
Electricity	0.0151	0.00235	0.00322	0.000436	−0.0933	−0.0193	−0.260**	−0.0373***
	(0.101)	(0.0158)	(0.114)	(0.0154)	(0.104)	(0.0204)	(0.104)	(0.0123)
Construction	−0.220***	−0.0295***	0.0573	0.00806	−0.129**	−0.0264**	0.0202	0.00348
	(0.0548)	(0.00632)	(0.0555)	(0.00809)	(0.0544)	(0.0104)	(0.0513)	(0.00895)
Sale	−0.0761*	−0.0113*	−0.0323	−0.00429	−0.00731	−0.00159	−0.0444	−0.00741
	(0.0411)	(0.00587)	(0.0445)	(0.00582)	(0.0399)	(0.00865)	(0.0419)	(0.00684)
Hotel	−0.362***	−0.0444***	−0.115	−0.0144*	−0.108*	−0.0224*	−0.213***	−0.0320***
	(0.0647)	(0.00616)	(0.0698)	(0.00809)	(0.0608)	(0.0119)	(0.0623)	(0.00815)
Transport	−0.186***	−0.0256***	−0.142***	−0.0175***	−0.0493	−0.0105	−0.0172	−0.00289
	(0.0467)	(0.00569)	(0.0511)	(0.00574)	(0.0457)	(0.00949)	(0.0473)	(0.00790)

(continued)

Table 3.4 (continued)

	Performance based on firm overall perform		Performance based on team/ wg/dept		Performance based on individual perform.		Piece rate or productivity paym.	
Variables	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal
Financial	0.140**	0.0235**	0.114*	0.0167	0.366***	0.0947***	0.0354	0.00615
	(0.0596)	(0.0109)	(0.0658)	(0.0104)	(0.0578)	(0.0173)	(0.0705)	(0.0125)
Estate	−0.260***	−0.0347***	−0.0786*	−0.0102*	−0.0411	−0.00879	−0.128***	−0.0204***
	(0.0432)	(0.00497)	(0.0470)	(0.00581)	(0.0421)	(0.00884)	(0.0475)	(0.00706)
Public Admin.	−1.070***	−0.0878***	−0.584***	−0.0546***	−0.378***	−0.0683***	−0.447***	−0.0589***
	(0.0669)	(0.00275)	(0.0652)	(0.00392)	(0.0510)	(0.00743)	(0.0605)	(0.00591)
Education	−1.258***	−0.0985***	−0.774***	−0.0665***	−0.548***	−0.0923***	−0.476***	−0.0627***
	(0.0682)	(0.00274)	(0.0655)	(0.00328)	(0.0504)	(0.00626)	(0.0580)	(0.00565)
Health	−0.945***	−0.0885***	−0.658***	−0.0615***	−0.468***	−0.0827***	−0.431***	−0.0588***
	(0.0610)	(0.00317)	(0.0599)	(0.00359)	(0.0470)	(0.00652)	(0.0543)	(0.00573)
Other serv.	−0.454***	−0.0523***	−0.205***	−0.0242***	−0.110*	−0.0226**	−0.110*	−0.0176*
	(0.0660)	(0.00541)	(0.0676)	(0.00687)	(0.0581)	(0.0113)	(0.0603)	(0.00898)
Househ.	−0.481*	−0.0528***	−0.299	−0.0325	−0.333*	−0.0599**	−0.189	−0.0284
	(0.261)	(0.0187)	(0.286)	(0.0240)	(0.199)	(0.0287)	(0.163)	(0.0215)
Extrat.	−0.381	−0.0447	–		−1.182***	−0.125***	–	
	(0.417)	(0.0354)			(0.453)	(0.0136)		
Central East	−0.0448	−0.00680	0.184***	0.0265***	0.0347	0.00763	0.312***	0.0582***
	(0.0369)	(0.00551)	(0.0393)	(0.00603)	(0.0329)	(0.00730)	(0.0387)	(0.00790)
Baltic	0.0803	0.0130	0.515***	0.0948***	0.0948**	0.0216**	0.649***	0.153***
	(0.0506)	(0.00857)	(0.0501)	(0.0119)	(0.0449)	(0.0107)	(0.0481)	(0.0145)
South Europe	−0.465***	−0.0603***	−0.213***	−0.0264***	−0.426***	−0.0815***	0.267***	0.0499***
	(0.0440)	(0.00462)	(0.0457)	(0.00515)	(0.0373)	(0.00613)	(0.0412)	(0.00844)
Anglosaxon	−0.153***	−0.0215***	−0.0372	−0.00492	−0.264***	−0.0504***	−0.182***	−0.0279***
	(0.0550)	(0.00697)	(0.0593)	(0.00765)	(0.0520)	(0.00856)	(0.0672)	(0.00915)
Continental	−0.0324	−0.00493	−0.0697*	−0.00918*	−0.194***	−0.0400***	−0.245***	−0.0383***
	(0.0358)	(0.00539)	(0.0407)	(0.00521)	(0.0334)	(0.00646)	(0.0426)	(0.00606)

(continued)

Table 3.4 (continued)

	Performance based on firm overall perform		Performance based on team/ wg/dept		Performance based on individual perform.		Piece rate or productivity paym.	
Variables	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal	Coeff.	Marginal
Constant	−2.059***		−2.238***		−1.620***		−1.469***	
	(0.170)		(0.177)		(0.146)		(0.165)	
Observations	31.384		31.405		31.445		31.424	
PseudoR^2	0.13		0.09		0.07		0.07	

Robust standard errors in parentheses
***$p<0.01$, **$p<0.05$, *$p<0.1$
Source Our elaborations on the 6th European Working Conditions survey microdata, European Foundation for the Improvement of Living and Working Conditions (2017b)

Table 3.5 Wage equations by gender

Variables	M	F
	(1)	(2)
Age	0.0396***	0.0268***
	(0.00378)	(0.00399)
Age squared	−0.000423***	−0.000298***
	(4.51e−05)	(4.64e−05)
Diploma	0.147***	0.103***
	(0.0167)	(0.0220)
Degree	0.242***	0.231***
	(0.0208)	(0.0251)
Temporary	−0.0431**	−0.0390**
	(0.0192)	(0.0189)
Apprenticeship	−0.556***	−0.334***
	(0.0874)	(0.0948)
No contract	−0.348***	−0.243***
	(0.0313)	(0.0327)
Seniority	0.00644***	0.00773***
	(0.000770)	(0.000769)
Firm size	0.0622***	0.0732***
	(0.00866)	(0.00909)
Piece rate or productivity payments	0.0564***	0.0384*
	(0.0165)	(0.0225)
Payments based on your individual performance	0.102***	0.135***
	(0.0160)	(0.0214)
Payments based on the performance of your team/working group/department	0.0563***	0.0746***
	(0.0206)	(0.0248)
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.119***	0.0742***
	(0.0170)	(0.0214)
Income from shares in the company you work for	−0.0281	−0.0146
	(0.0321)	(0.0400)
Advantages of other nature (for instance medical services, access to shops, etc.)	0.0131	0.0594***
	(0.0206)	(0.0186)
Observations	11,106	9788
R-squared	0.688	0.706

***$p<0.01$, **$p<0.05$, *$p<0.1$

Source Our elaboration on the 6th European Working Conditions survey microdata, European Foundation for the Improvement of Living and Working Conditions (2017b)

are less likely to occur with respect to manufacturing in Education, Public Administration, Health and Other Services Sectors. Team performance-related payments are more spread, with respect to Scandinavian and Nordic countries in Central Eastern countries[3]; while Southern European countries workers are less likely to have performance-related payments and more likely to have piece rate and productivity related payments.

The lower probability of receiving performance-related pay also after controlling for profession, sector, and other observable factors can be related to **statistical discrimination** on the part of the employers as stressed also by Chiang and Ohtake (2014) with reference to the Japanese Labour Markets.

We have then estimated wage equations among employees aged from 15 to 75, not working part-time and working more than 10 hours a week. Table 3.5 reports the coefficients of a set of variables included in the model where we have also controlled for employment sector, profession and set of countries. In column (1) we report the coefficients in the male wage equation and in column (2) the coefficients of the variables included in the female wage equation.

Hourly wages increase with age, seniority and level of education with a similar effect for men and women. Being apprentice or having no contract penalizes more men than women in the sample, while the effect of firm size is similar. Having piece rate or productivity related pay increases men's wages by 6% and women's by 4%, when the payment is related to individual performance the effect is 10% for men and 14% for women. When the payment is related to the team or working group or department performances the **hourly wage** increases by 6% for men and 7% for women whereas the difference is higher when payments are related to the overall performance of the company.

The **gender gap** in net hourly wages is 25% at the disadvantage of women. Analysing the contribution to the gender gap of the variables of interest in this study (performance-related pay systems) having controlled also for sectors of employment, types of job and countries of residence (Table 3.6), we can see that apart from income from shares in the company that does not significantly contribute to the differential, all the other forms of PP increase the gap at the disadvantage of women in the explained part of the differential. We can therefore conclude, having

Table 3.6 Contribution of a set of explanatory variables to the explained and unexplained part of the wage differential

Variables	Explained	Unexplained
	(1)	(2)
Age	−0.00316	0.524**
	(0.00620)	(0.224)
Age squared	0.000428	−0.226*
	(0.00552)	(0.117)
Diploma	0.00773***	0.0206
	(0.00132)	(0.0130)
Degree	−0.0275***	0.00508
	(0.00262)	(0.0126)
Temporary	0.000503*	−0.000489
	(0.000274)	(0.00318)
Apprenticeship	0.00325***	−0.0125
	(0.00108)	(0.0105)
No contract	0.00508***	−0.0344
	(0.000930)	(0.0393)
Seniority	−9.13e−05	−0.00190*
	(0.000803)	(0.00112)
Firm size	−0.00432***	−0.00620**
	(0.00126)	(0.00272)
Piece rate or productivity payments	0.00263***	0.00173
	(0.000727)	(0.00290)
Payments based on your individual performance	0.00461***	−0.00515
	(0.000859)	(0.00414)
Payments based on the performance of your team/working group/department	0.00266***	−0.00155
	(0.000735)	(0.00270)
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.00578***	0.00475
	(0.000910)	(0.00293)
Income from shares in the company you work for	−0.000491	−0.000295
	(0.000469)	(0.00133)
Advantages of other nature (for instance medical services, access to shops, etc.)	0.000290	−0.00373*
	(0.000189)	(0.00224)

***$p<0.01$, **$p<0.05$, *$p<0.1$

Source Our elaboration on the 6th European Working Conditions survey microdata, European Foundation for the Improvement of Living and Working Conditions (2017b)

analysed the probability of having at least part of the wage related to performance and found that women tend to be less involved in these forms of systems of payment, that the wage gap at the disadvantage of women increases by the lower probability for women to be in PP systems. This is also in line with the literature (as found for instance by McGee et al. 2015 for the USA).

A further question to be investigated is to what extent different systems of payment affect the effort-reward balance. To reply to this question we exploit the availability in the 6th wave of EWCS of a question 'Considering all my efforts and achievements in my job, I feel I get paid appropriately' classifying as effort-reward balance if the employee strongly agrees or agrees with the sentence.

In line with what found by European Foundation for the Improvement of Living and Working Conditions (2017a) we find an increase in the percentage of employees stating they feel to be treated fairly in the highest deciles of the **hourly wage distribution** both for men and for women (Fig. 3.1). Those who receive at least part of their wage in forms of performance-related pay or piece rate (adopting a broad measure of performance-related pay that includes piece rate productivity

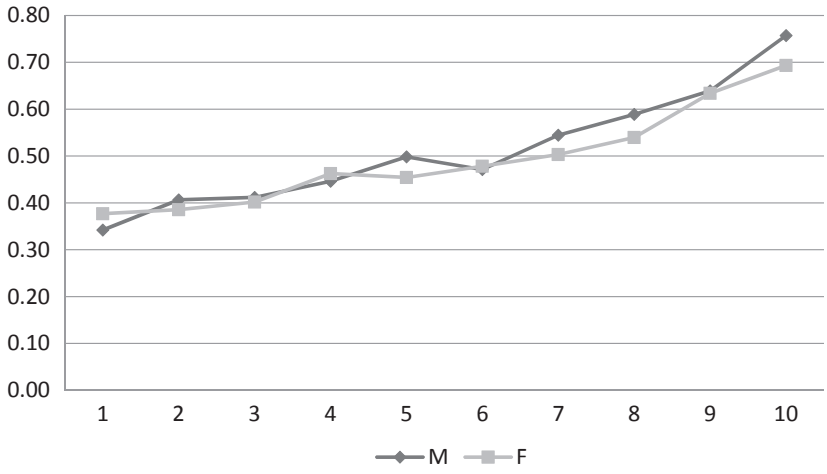

Fig. 3.1 Effort-reward balance by gender and deciles of hourly wage distribution employees aged from 15 to 75 (*Source* Our Elaborations from EWCS 2015 microdata)

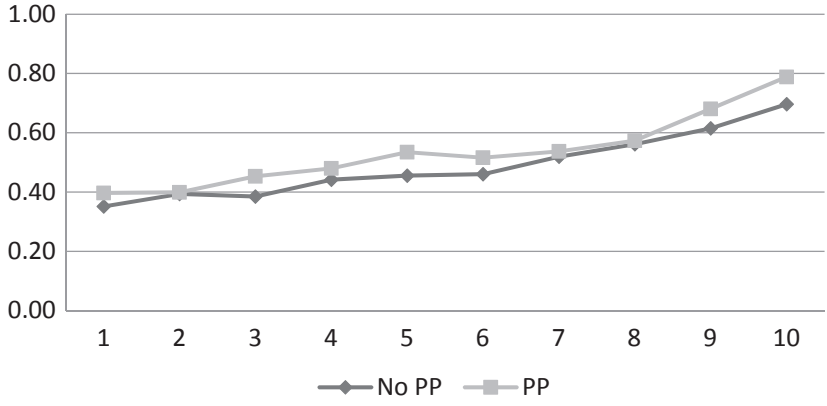

Fig. 3.2 Effort-reward balance by presence of performance-related payments and deciles of hourly wage distribution—employees aged from 15 to 75 (*Source* Our Elaborations from EWCS 2015 microdata)

payments, shares, individual, team and firm's performance-related payments) show a higher level of effort-reward balance (55% on average with regards to 49% of those who receive no performance-related pay). The increase in the balance between effort and rewards is steadier for employees having performance-related pay as Fig. 3.2 shows.

To estimate the impact of the system of payments on the employees' effort-reward balance we have estimated a probit model with a dummy variable taking value of one if the employee replies that he agrees or strongly agrees to this sentence: 'Considering all my efforts and achievements in my job, I feel I get paid appropriately'. The estimated coefficients and marginal effects are evaluated at continuous variables sample means and, for dummy variables, for discrete change of dummy variable from 0 to 1 are reported in Table 3.7.

Effort-reward balance decreases with employees' age, decreases for women, but the effect is not statistically significant, and decreases for temporary workers (by 4%). Turning to the different systems of variable pay, we detect a positive effect on the effort-reward balance by 4% if there is a system of pay related to individual performance, or to team/working group or department performance (by 5%) or to firm's performance (by 3%) and also a positive effect of having different forms of fringe benefits (+2%).

Table 3.7 Probability of effort-reward balance

Variables	Coeff.	Marginals
Age	−0.0529***	−0.0211***
	(0.00563)	(0.00225)
Age squared	0.000571***	0.000228***
	(6.61e−05)	(2.63e−05)
Female	−0.0286	−0.0114
	(0.0216)	(0.00862)
Diploma	0.0264	0.0105
	(0.0298)	(0.0119)
Degree	0.0562	0.0224
	(0.0357)	(0.0142)
Temporary	−0.0887***	−0.0354***
	(0.0298)	(0.0119)
Part-time	0.00764	0.00305
	(0.0266)	(0.0106)
Seniority	4.39e−05	1.75e−05
	(0.00126)	(0.000502)
Firm size	−0.111***	−0.0443***
	(0.0137)	(0.00545)
Wage deciles	0.117***	0.0465***
	(0.00682)	(0.00272)
Piece rate or productivity payments	−0.0150	−0.00599
	(0.0322)	(0.0128)
Payments based on your individual performance	0.0978***	0.0389***
	(0.0301)	(0.0119)
Payments based on the performance of your team/working group/department	0.118***	0.0468***
	(0.0394)	(0.0156)
Payments based on the overall performance of the company (profit sharing scheme) where you work	0.0777**	0.0310**
	(0.0350)	(0.0139)
Income from shares in the company you work for	0.0549	0.0219
	(0.0625)	(0.0249)
Advantages of other nature (for instance medical services, access to shops, etc.)	0.0565*	0.0225*
	(0.0343)	(0.0137)
Armed force	0.167	0.0662
	(0.152)	(0.0596)
Managerial	0.168***	0.0666***
	(0.0500)	(0.0197)
Professional	−0.0102	−0.00406
	(0.0395)	(0.0157)

(continued)

Table 3.7 (continued)

Variables	Coeff.	Marginals
Technician	−0.0453	−0.0181
	(0.0379)	(0.0151)
Sales workers	−0.157***	−0.0625***
	(0.0368)	(0.0146)
Skilled agr.	−0.149	−0.0595
	(0.115)	(0.0454)
Craft worker	−0.150***	−0.0598***
	(0.0450)	(0.0178)
Plant opert.	−0.170***	−0.0678***
	(0.0452)	(0.0179)
Elementary	−0.107**	−0.0425**
	(0.0420)	(0.0167)
Agriculture	0.00359	0.00143
	(0.0831)	(0.0332)
Fishing	0.0590	0.0235
	(0.431)	(0.171)
Mining	0.177	0.0699
	(0.136)	(0.0531)
Electricity	0.152	0.0601
	(0.0946)	(0.0372)
Construction	−0.00577	−0.00230
	(0.0492)	(0.0196)
Sale	−0.00645	−0.00257
	(0.0378)	(0.0151)
Hotel	−0.105**	−0.0419**
	(0.0519)	(0.0206)
Transport	−0.0153	−0.00611
	(0.0442)	(0.0176)
Financial	−0.0512	−0.0204
	(0.0624)	(0.0249)
Estate	−0.0621	−0.0248
	(0.0404)	(0.0161)
Public Admin.	0.0492	0.0196
	(0.0460)	(0.0183)
Education	−0.138***	−0.0551***
	(0.0454)	(0.0180)
Health	−0.232***	−0.0919***
	(0.0414)	(0.0163)
Other serv.	−0.0671	−0.0267
	(0.0512)	(0.0204)
Househ.	−0.112	−0.0447
	(0.103)	(0.0408)

(continued)

Table 3.7 (continued)

Variables	Coeff.	Marginals
Extrat.	1.066***	0.353***
	(0.409)	(0.0906)
Central Eastern countries	0.107**	0.0425**
	(0.0488)	(0.0194)
Baltic countries	−0.0611	−0.0244
	(0.0553)	(0.0221)
Southern European	−0.0508	−0.0203
	(0.0394)	(0.0157)
Anglo-saxon countries	−0.201***	−0.0799***
	(0.0448)	(0.0176)
Continental countries	−0.116***	−0.0461***
	(0.0308)	(0.0122)
Constant	0.942***	
	(0.134)	
Observations	25,174	25,174
PseudoR^2	0.05	

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$
dF/dx is for discrete change of dummy variable from 0 to 1
Continuous variables evaluated at their sample means

Conclusions

Performance-related systems of pay, also after controlling for other sociodemographic and work related variables, appear to be less spread among female employees. We have also detected, in line with the literature, the positive effect of being in apical positions and having a higher level of education in determining a higher probability of having at least part of one's pay related to performance.

Women's lower presence in performance-related pay systems contributes to increase the wage gap at their disadvantage. A further negative effect of a lower presence in performance-related pay systems can also be found on the **effort-reward balance** that appears to be higher for employees having at least part of their pay related to individual, team/working group or department or firm's performances.

Notes

1. Greene (2002).
2. Oaxaca (1973), Greene (2002), Jann (2008), and Elder et al. (2010).
3. Continental: Austria, France, Germany, Belgium, and Luxembourg; Anglo-Saxon: UK-Ireland; Nordic: Norway, Sweden, Finland, Denmark, and the Netherlands; Southern European: Italy, Spain, Greece, Portugal, and Turkey; Central/Eastern European: Bulgaria, Poland, Hungary, Romania.

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4

Technology, Power, and the Organization: Wearable Technologies and Their Implications for the Performance Appraisal

Lia Tirabeni

Introduction

As early suggested by Zuboff (1988), Information Communication Technologies (ICTs) requires more interpretative processes if compared to traditional ones, because information technologies processes enable the alteration of symbolic representations (acts or information) rather than tangible objects. Indeed, as already noticed by Heidegger and Krell (1980) technology *is* exactly the way people employ it, and particularly the way in which individuals free its potential and allow technology to shape what they are. Accordingly, organizational postmodernist scholars underlined how technology controls and dominates human behavior by imposing a particular discipline to all the organizational members, and how managers obtain more power thanks to the control of such technologies. Likewise, organizational scholars—belonging to different theoretical strands such as Actor–Network Theory (Czarniawska and Hernes 2005;

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_4

Czarniawska 2017) or Practice Theory (Gherardi 2009; Orlikowski 2007, 2010)—focused on those organizational practices emerging around information technologies and infrastructures, challenging or reinforcing pre-existing relations. More in general, over the last decades a wide debate emerged around ICTs, thus contributing to shift organization studies from a deterministic view of technology—in which technologies are interpreted as external forces that have an impact on society—to a socio-material perspective—characterized by a deep interest on how new technologies shape (and are shaped by) organizational life. Through a meta-analysis, the chapter investigates these issues: it first underlines the critical role played by ubiquitous technologies in enabling and shaping power within workplaces, and then reasons on the implications of these processes and technologies for workers performance appraisal systems.

As a kind of partnership between the employee and the supervisor (Carson et al. 1991; Payne et al. 2009), appraisal systems can be designed as participatory. At the same time, today's online performance appraisal systems offer a novel opportunity for companies to establish a more balanced and fruitful relationship between employees and supervisors as well as to improve the evaluation of workers performance. In this vein, the possibility to combine wearable technologies with participatory online performance appraisal systems that potentially would make the employees' information even more rich and available raises new opportunities and concerns. Thus, this chapter aims at answering the following research question: what is the role of wearable technologies in shaping power within organizations and their related implications for workers performance appraisal?

The remainder of the chapter is organized as follows: it starts with a review of the main pre-existing research concerning the link between power, technology, and the organization (sect. "Technology, Power, and the Organization"); then an analysis of practices enabled by wearable technologies deployed in organizations as well as their meanings with respect to issues of power (sects. "Different Applications of Wearable Technologies: From Leisure Time to Working Time" and "Wearable Technologies at Work and Power Issues") followed. The subsequent section presents a discussion of implications for workers performance appraisal driven by a Strengths, Weakness, Opportunities, and Threats (SWOT) analysis (sect.

"Implications for Designing Workers Performance Appraisal Systems: A SWOT Analysis"). The chapter ends with concluding remarks (sect. "Concluding Remarks and Future Research Directions").

Technology, Power, and the Organization

Technology has always played a central role in organizational affairs (Orlikowski and Scott 2008), and although it does not represent a necessary feature of the exercise of power, it nevertheless appears as an important modality of its operation in contemporary organizations (Bloomfield and Hayes 2009). Furthermore, it is the introduction of technology to organizations that often produces opportunities for managers to change the way they control workers (Gray 2001; Attewell 1987; Kling and Iacono 1984); indeed technology has often proved to be crucial in leaders and managers' efforts of looking for new ways for bringing their organizational environments under control (Simon 1965). ICTs, in particular, can provide new data collection and analysis tools in order to increase some aspects concerning employees, i.e. the visibility of employee behavior, to uncover and relate patterns of behavior to individual, and aggregate performance outcomes (Stanton and Stam 2003).

Some authors state that, within organizations ICTs can be used to support either *empowering* or *disempowering* strategies (Walton 1989; Zuboff 1988), whereas Davenport (1993) distinguishes between cultures of *control* and *empowerment* as two extremes, underlining how both represent different forms of managerial control. Zuboff (1988) argues that managers can choose between using the information generated through automation for reducing the level of skills required to employees ("*de-skilling*"), or rather for "increasing" work, namely to give power to employees and increase the human work ("*up-skilling*"). However, technology is not simply an instrument of power that conveys management choices, but rather depends on a certain number of other factors, such as other technologies and actors involved (Bloomfield and Hayes 2009). According to a socio-material perspective, this finally means that employees play a significant role too in shaping how technologies are then employed in the organization.

As a first step, it can be useful to analytically distinguish between power and control. These are two terms strictly related but with a slightly different meaning. Power represents the *ability* to achieve a goal even against the resistance of others, while control is the *act* of achieving that goal (Tompkins and Cheney 1985). Thus, "an individual has power to the extent that he or she can control the contributions of others to meeting a goal" (Gray 2001, p. 371). Since ICTs create new ways for managers to control employees, it consequently enable novel forms of power exerted by them. Actually, there are many definitions of power that can be found in the literature in order to understand how power and control relate and evolve with technology within organizations. According to Clegg et al. (2006, p. 3), "power is to organization as oxygen is to breathing" but, although fundamental, defining precisely what power really is it is not an easy task (Lukes 2005; Gekara and Fairbrother 2013). Held (1995) underlines that power expresses simultaneously intentions and purposes of agencies and institutions and the related balance of resources they can deploy to each others. Managers exert power mainly through mechanisms of rewards and sanctions (Stanton and Stam 2003); however managers are certainly not the only actors exerting power within organizations (Crozier and Friedberg 1977). For example, according to Giddens' structuration theory (Giddens 1984), Brocklehurst (2001) suggests that within an institution a structure of domination is always precarious, and this consequently requires its continuous reproduction through action. This means that those actors in subordinate positions are never without resources: they will constantly try to put under control the reproduction of domination's conditions. The control—namely the actors and groups' ability to influence the circumstances of others' action (Giddens 1984)—generates a complex dynamic where the distribution of power continually shifts from a group to another. In fact, as noted by Fleming and Spicer (2014, p. 1), "rather than being an aberration, it seems that power is an endemic part of organizational life". Foucauldian approaches too have suggested that power resides between individuals, actors, and organizations rather than being seated within any given member (Clegg 1990; Sewell 1998, 2012). Thus power is a relationship, rather than an actor's attribute and according to Crozier and Friedberg (1977) it is by gaining

control of crucial uncertainties that people establish their power: precisely, in a given organization cooperation between people is possible mainly due to the coordination, regulation, and taming of power. Although within the organizational life power generally owns a negative meaning as it usually implies coercion and hierarchies, however, as noted by Clegg et al. (2006), it can be a very positive phenomenon, but at certain conditions only.

In order to deepen the very nature of power in different organizational contexts, scholars focused on its different sources and expressions. Firstly, Crozier and Friedberg (1977) identified four sources of power within organizations, namely (1) skills, (2) relations between the organization and its environment, (3) communication and information, and (4) organizational rules. The authors observed how individuals and groups follow strategies allowing them to achieve their objectives within limits: the individual source of power derives from the margin of freedom enjoyed by he/she in relation to others he/she depends on. Within this perspective, the actor's power is "a function of the size of the zone of uncertainty that the unpredictability of the actor's conduct enables him to control vis-a-vis his partners" (Crozier and Friedberg 1977, p. 34). Organizational actors can use—or not—the different sources of power in order to establish their relative positions in the organization's power structure. Indeed, the objective existence of a source does not imply its use and more importantly the ability of actors to catch the opportunity it offers. In this vein, the same source of uncertainty can become an important source of power and profoundly influence an organization's functioning or, on the contrary, can remain unused and less useful within another organization that employs the same technology.

Secondly, Fleming and Spicer (2014) proposed a model characterized by four different power's expressions, namely coercion, manipulation, domination, and subjectification. Each expression can appear at different organizational levels, namely *in, through, over, or against* the organization. These expressions can be episodic, as for *coercion* and *manipulation*; or rather systematic, as for *domination* and *subjectification*. Coercion implies the direct exercise of power by individuals to achieve certain political ends. Domination means that actors establish

influence through the construction of ideological values that become hegemonic. It is something concerning our preferences and attitudes. Manipulation is where actors seek to either limit the issues that are discussed or fit issues within acceptable boundaries. Finally, subjectification is a kind of influence that seeks to determine an actor's very sense of self, including their emotions and identity. While domination shapes what is considered worthy of attention, subjectification goes deeper, constituting what the person is: their lived sense of identity and selfhood (idem).

With respect to technology and its relation with power issues, some studies focused on organizational technologies and infrastructures that could promote certain particularly self-determined identities. Electronic surveillance is salient within this research. Sewell and Wilkinson (1992), for example, offer an analysis of subjectification in their study of an electronic firm employing peers pressure instruments and performance indicators in order to discipline workers, thus creating in them a sense of inadequacy through the embedding of a concept of regime in their very sense of identity. The work done by Knights and Murray (1992) confirms that there is a social power enabled by technology, if activated within certain political spaces. From the above it emerges how the relationship between power, technology, and the organization is complex and multifaceted.

In fact, technology takes shape within techniques and the disciplinary power machine (Foucault 1979), works inside specific networks of power (Clegg 1989), and reinforces inclusion and exclusion boundaries (Latour 1992, 2005) while expands remote control (Law 1984). Since our concepts of reality are mediated by technology (Bloomfield and Coombs 1992), it can also play a significant role in shaping our ideas and subjectivities finally influencing our preferences and identities (Knights and Murray 1992). Thus, the understanding of power has to be sensitive to all the dimensions and modalities—i.e. practices, symbolic, and material resources etc.—through which it may operate (Law 1994). The following paragraph is devoted to the analysis of work practices enabled by wearable technologies and deployed in organizations along with their meaning with respect to issues of power.

Different Applications of Wearable Technologies: From Leisure Time to Working Time

Ubiquitous technologies can offer new opportunities for both employers and employees to exert power within organizations. Actually, there is a long tradition of studies on ICTs use in organizations—such as those studies regarding the practice of remote working—along with a still controversial debate on their different organizational consequences (Albano et al. 2018). However, the experimentation of different smart monitoring tools—namely *wearable devices*—for tracking employees' vital signs and/or other parameters is very recent. Only in the last few years companies have indeed started to evolve more types of devices small enough to wear and including powerful sensor technologies able to collect and deliver information about their surroundings. These new devices represent a technology worn on the human body: they can be used for tracking a user's vital signs or pieces of data related to health and fitness, location, or even his/her biofeedback indicating emotions.

About the massive use of this technology for self-monitoring, Lupton (2014b) refers to self-tracking cultures, where the focus is on the practice of gathering data regarding oneself (self-tracking) on a regular basis and then recording and analyzing them in order to produce statistics and other data concerning sensations and usual behaviors. Through the practice of self-tracking, the individual perceives to have and maintain a control over his/her body: the body, previously perceived as messy, now appears as clean and ordered thanks to the data analysis coming from it (idem). The author identified five ideal-typical self-tracking patterns (Lupton 2014a): private (for one's own purposes only); communal (sharing data with other self-trackers); pushed (encouraged by others); imposed (foisted upon people); and exploited (where people's personal data are repurposed for the use of others). In order to be completely understood these practices have to be analyzed within the specific context in which they appear, and obviously self-tracking practices will assume different meanings and implications when adopted in the context of work.

However, when not embedded in a working environment, self-tracking can be understood as a true strategy for self management in different contexts, such as in sports where the athletes can make sense of their data by exploiting the knowledge they have about their own body and sports practice (Rapp and Tirabeni 2018). More in general, in the daily life the basic idea is that an improved self-knowledge can help self-trackers in exerting a greater control over their destiny consequently leading them to, i.e. a superior sleep quality, less stress, greater work productivity, better social relations, etc. At least in theory, all this is gained voluntary, as part of a real personal research finalized to self-optimization and a playful method for self-monitoring (Lupton 2015; Ruckenstein 2014). In this vein, self-tracking practices are often seen as ways for reinventing ourselves. However, the use of smart devices in order to gather biometric data can make people aware of their very physical body through the constant alert on their possibilities and limits, and this could finally lead to a great discomfort (Ruckenstein 2014).

But what would happen if these practices lose their distinctive voluntary aspect? According to a Foucaultian perspective, self-tracking could be also seen as one of the many strategies and rhetorics positioning the ideal individual as a responsible citizen able to take care of him/herself, and of their interests and well-being. This consideration has relevant implications when applied in the context of work.

Educational, medical, health promotion institutions, together with many workplaces have been recently started to encourage people in self-monitoring through digital technologies as part of programs finalized at increasing workers' productivity (Lupton 2014b). Thus, along with the proliferations of wearable devices in different domains, their entry in the workplace followed (Giddens et al. 2016). In fact, while the initial field of application has been healthcare, and then fitness and sports, recently these technologies have been started to be employed in contexts of work where are variously applied with improving and monitoring purposes.

Within working environments wearables are mainly used for: (i) improving workers safety, i.e. by monitoring the risk of fall and communicate alarm messages in case of danger; (ii) improving individual performance, through the monitoring of workers' physical parameters (Wilson 2013) and various forms of engagement (Alahäivälä and

Oinas-Kukkonen 2016); (iii) stimulating physical activity, often within company wellness programs (Giddens et al. 2016; Mettler and Wulf 2019); (iv) detecting work-related stress (Han et al. 2017) and fatigue, and more in general; and (v) improving work ergonomics (Peppoloni et al. 2016; Mettler and Wulf 2019).

The adoption of wearables in the workplace has been claimed by both critics, such as Morozov (2013), and promoters, such as Bersin (2014), as a Neo-Taylorist trend where working bodies are continuously regulated through the imposition of productivity standards, time-motion measurement, transmission and analysis of data and systems of punishment and rewards. In this frame, Wilson (2013) calls physiolytics the practice of linking wearable computing devices with data analysis and quantified feedback to improve performance. The author underlines that this practice is now spreading to workers in factory and office settings, and this may represent the next evolution of Taylor's time and motion studies. In fact, if Taylor (1911) examined iron workers individually in order to derive generalizable insights, *physiolytics* goes further, offering three kinds of analysis finally allowing: (1) the quantification of movements within physical work environments; (2) the possibility of working with information more efficiently; and (3) the knowledge of the "big data" inside employees, namely a quantification of the employees' physiological functions. These analysis all together have the capability to deepen how people work (Wilson 2013). Concerning the quantification of movements within a closed space, an example is represented by Amazon that equips its warehouse workers with wearable devices with an embedded GPS technology able to inform them on the faster way to take when collecting an item for an order (Solon 2015). In this case, Amazon clearly implements the use of GPS devices in order to maximize workers efficiency. Another extreme way for controlling employees has been developed by the start-up Sociometric Solutions through the sociometric badge (Lohr 2014). This device, equipped with two microphones, a location sensor and an accelerometer, monitors the communications behavior of individual (i.e., tone of voice, posture and body language, as well as who spoke to whom and for how long). This solution is already working in a certain number of companies in different sectors involving thousands of employees (idem).

According to this line of research, Mettler and Wulf (2019) also explore the mental models of employees who are faced with the introduction of physiolytics as part of corporate wellness or security programs. They identify five distinct user types each of which characterizes a specific point of view on physiolytics at the workplace. More precisely, the identified mental models are: the freedom loving, the individualist, the cynical, the tech independent, and the balancer. The authors found that employees may perceive several action opportunities (*affordances*) or constraints of physiolytics according to their specific mental models. For example, in the case of so-called "freedom-loving users" physiolytics may appear as solutions that should primarily be designed for the purpose of increasing awareness and cognition of work-related issues with health and well-being or which help them to counter unhealthy work habits. Instead, for the "individualist users" this technology adoption is not negative per se if helps them to improve their health. However, they do not trust the pretense that physiolytics could really achieve this promise. The authors' analysis finally suggest that employers must take into account their employees' different mental models if they aim at more effectively introducing wearables in the workplace. In fact, these different mental models are likely to lead to different expectations and behaviors.

Wearable Technologies at Work and Power Issues

The practice of self-tracking at work gives birth to new power dynamics and raises new ethical and social justice issues. From a more critical standpoint, for example, taking no part in wellness programs may lead to higher healthcare insurances, as in the case of USA where employers cover healthcare costs of their employees, and therefore have a legitimate economic interest in their health (Olson 2014). Those companies producing wearable technologies are consequently signing agreements with employers and insurance companies in order to sell them their activity trackers and related data analysis softwares as part of wellness programs.

Employees have to give their consent and allow their employers to see the activity data. Obviously, when incentives such as a lower healthcare insurance are offered, the given consent becomes far from voluntary. As suggested also in this chapter, wearing a device can be required as part of the monitoring of workers productivity and directly connected to salary and job promotion opportunities within workers performance appraisal systems. Consequently, it becomes hard to say how voluntary is to take part to these programs, and how it is imposed instead. It is then impossible not to notice how the original and distinctive voluntary aspects of self-tracking gradually became more and more driven by wide commercial and economic imperatives. Wearable devices at work, employed in such ways, may represent a kind of new frontier for monitoring and controlling employees, giving life to the idea that it is now concretely possible to quantify everything, even the self (Swan 2013), even at work (O'Neill 2017). In this vein, managerial control has been slowly shifted from the mere employees' work to their bodies, perhaps their minds, enabling another form of workplace surveillance. This new form of surveillance may represent a novel kind of managerial control leading also the worker to rigorously self-monitor him/herself, consequently prompting him/her to an increased self-control. However, from another less critical viewpoint, that is only a part of the story. As said, workers are not without power and the possibility to exert it in original ways. First, scholars suggest also that at least a part of these technologies in the contemporary workplace does not try to adapt bodies and gestures to the rhythm of the production line, as done by Taylorism. By contrast, wearables often gather data about psycho-physical conditions of workers and their daily habits, supporting the companies in the creation of organizational rules and standards of productivity more aligned with the "natural" rhythms of worker's attention and biological temporalities (O'Neill 2017). Then, other scholars underline how workers can proactively react to the possible indiscriminate and immotivate introduction of wearables (Kaupins and Coco 2017; Li et al. 2016) with relevant and unexpected organizational consequences.

To sum up, this chapter tries to give an answer to the following research question: what is the role of wearable technologies in shaping power within organizations and their related implications for workers

performance appraisal? First at all, the analysis of the applications and uses of wearable devices in the context of work highlights a current real shift from a mere control of the employee's work to the control of his/her whole employee.

Workplace surveillance, control, and the exercise of power within organizations are anything new. However, new it is the way today organizations can monitor their employees, thus implying novel forms of power, since advanced technological tools are making possible to measure and monitor employees as never before, with the promise of fundamentally changing the way people work. As underlined by Lohr (2014), through these novel digital tools companies have found, for example, that workers are more productive if they have more social interactions, thus some companies introduced systems and tools in order to stimulate more interaction among workers with increased sales and less turnover as a result. However, with the application of these tools, control boundaries have been collapsed. Furthermore, the ancient dialectic between employees' empowerment and disempowerment (Walton 1989; Zuboff 1988) does not disappear, but rather still remains heated.

Research on the application of wearable technologies in the context of work and related practices of self-tracking is still scarce, while there is a growing literature concerning their private use. More in general, and with respect to the private use only, self-tracking can be seen first (i) as a kind of strategy for self management, as the individual perceives to own and maintain the control over the body, and consequently to obtain a better health, a greater work productivity, etc., within a perspective of continuous self-development and optimization (Lupton 2015; Ruckenstein 2014); then (ii) as an instrument for helping people in being more aware of their bodies through a constant alert regarding limits and abilities of the body (Rapp and Tirabeni 2018) but this could be also a great source of discomfort (Ruckenstein 2014). If applied to the context of work, the constant monitoring enabled by wearable devices implies first (i) a quantification of workers' movements within a physical space: this creates the concrete possibility for the whole organization to work with information in a more efficient way, and gives to managers a deep knowledge regarding the data "within" all the employees (Wilson 2013); then (ii) new power dynamics as well as ethical and social justice

issues (Lupton 2014b): for example, taking no part in wellness programs may lead to higher healthcare insurances; furthermore employees have to allow their employers to see the activity data, etc. Consequently, it is clear that the given consent becomes far from voluntary if incentives such as a lower healthcare insurance are offered; and finally (iii) the reinforcement of an empowerment rhetoric, where workers' well-being and performance are strictly related. This well-being and performance rhetoric has important consequences for the health and the actual well-being of the worker. Ironically, we could ask how much "wellness" there is in these wellness programs. In fact, exactly those discourses regarding wellness and self-care as well as the self-tracking cultures themselves are often dramatically moralistic and characterized by judging traits built over shared ideas concerning the personal commitment for physical wellness and productivity (Lupton 1995, 2013). When concepts such as health, wellness, and productivity are produced and reproduced thanks to the data gathered through self-monitoring, the social determinants of these attributes remain unclear. Illness, the suffering, a lack of happiness or working fulfillment become represented as failures in the individual self-control or efficiency: eventually, instead of receiving acceptance and support by their organization, workers are required to make greater and more effective efforts, and perhaps to adopt greater self-tracking regimes, in order to produce that long overdue "better self", namely a rhetorically healthier and more productive self. It becomes apparent how using these devices may maintain and even reinforce the old dialectic regarding workers' empowerment/disempowerment (Walton 1989; Zuboff 1988). For example, concerning the most of applications of wearable devices at work, a tacit but more than evident empowerment rhetoric finalized, at least in theory, at expanding work and workers' capabilities with positive impacts both for the firm and the worker it is likely to emerge. But this seems to be just a rhetoric. The use of these tools may intensify the managerial control since it allows to monitor not only the work done, but the "whole" employee also. Meanwhile these devices seem to intensify workers self-control too. As Lupton (2014b) noted, wearable technologies can make the worker suddenly perceiving to be naked and in a direct contact with his/her physical body, with negative consequences.

According to all these considerations, organizations that aim at introducing such technologies should always bear in mind their real purpose and how to transmit the right message to employees in order to prevent negative consequences for both workers and the organization. Particularly, employers who decide to apply these tools for performance appraisal must carefully design their related appraisal systems in a way that really support the individual development.

As we have seen, based on Fleming and Spicer (2014), power can take different expressions. According to the authors' model, work practices enabled by ubiquitous technologies may generate different expressions of power. Wearable devices at work seem to enable subjectification as a form of influence that seeks to determine the actors' very sense of self, including their emotions and identity, while it seems to imply also another particular expression of power, namely domination as a form of systemic power, because domination appears whereas actors try to establish an influence through the construction of ideological values that become hegemonic. This kind of power is the one shaping our preferences and attitudes, and in the case of wearables directly relates to that rhetoric of wellness and performance "at all costs". Literature suggests a current management tendency to incorporate smart ubiquitous devices in the context of work in a perspective that goes toward a worker's *empowerment* rhetoric. However managerial control and the power exerted in the organization is never unidirectional. Brocklehurst (2001) indeed suggests how actors in subordinate positions are never without resources and underlines that the distribution of power constantly shifts from a group to another. This finally means that employees play a significant role too in how these technologies are eventually employed within their organizations. Indeed, at the same time, as underlined by Crozier and Friedberg (1977), in a given organization there are many sources of power an actor can exploit. All these sources are relevant to the introduction of wearables at work, particularly the control of the communication and information sources: these tools may offer new opportunities to the employees for communicating (or not) relevant information concerning their work and behaviors.

All these previous considerations have clearly important organizational consequences. More precisely, with the introduction of wearable

devices the control seem to be mainly centered on the body, that becomes a kind of measure machine. This is not just a dynamic of top-down control, but rather a more articulated dynamic where the worker is blindly prompted to self-monitor, namely to self-control. However, all this does not imply a necessary negative meaning of power, but rather, as suggested by Clegg et al. (2006), it can be potentially positive, at least at certain organizational conditions. From one hand, when applied in more traditional and hierarchical organizational settings these instruments can exacerbate pre-existing power dynamics resulting in a more diffuse and pervasive control from the managers' side, finally resulting in a lower workers performance. From the other hand, if applied in flatter and open organizations with a culture enabling bottom-up participation these instruments can let flow a liberating and emancipatory potential that makes them really functional to the individual "self-optimization": these tools can make individuals more aware of themselves then in the past. It is in such organizational contexts that wearables may really open up new possibilities for employees to exploit that fundamental source of power, the one related to the control of the information coming from their bodies and the control of that communication among the organizational actors. In this vein, wearable devices can be understood as instruments for giving power to the employees, but this certainly implies a considerable ability in the art of self-managing and at the same time a participative as well as trustworthy organizational climate. Wearable devices at work, exactly as it already happens in the private use, when employed in an aware manner may offer employees a new self knowledge exploitable for various purposes. Eventually, the individual self-optimization could arguably translate into a more general organizational optimization.

Implications for Designing Workers Performance Appraisal Systems: A SWOT Analysis

The above analysis has some implications for the ad hoc design of workers performance appraisal systems. As underlined by Payne et al. (2009), although usually defined as a measurement tool, performance appraisal

is a social and communication process where a supervisor evaluates an employee's behavior in the workplace and communicates those ratings and feedback back to the employee (Murphy and Cleveland 1995). Thus, it may represent a kind of partnership between the employee and the supervisor (Carson et al. 1991; Payne et al. 2009). Appraisal systems can be designed as participatory: in fact participatory performance appraisal is an essential and proven attribute of any effective performance appraisal system (Roberts 2003; Cawley et al. 1998). Roberts (2003) suggests that a comprehensive and effective participation within the performance appraisal process consists of joint rater-ratee development of: (1) performance standards, (2) the rating form, (3) employee self-appraisal, and (4) ratee participation in the interview. Particularly self-appraisals provide employees with the opportunity to systematically assess their performance, and when combined with data coming from wearables may mitigate potential negative reactions to the digital tools. Furthermore, today's online performance appraisal systems offer a new opportunity for companies to establish a more balanced and fruitful relationship between employees and supervisors and to improve the evaluation of workers performance. In fact, current electronic—online—performance appraisal systems centralize some human resource functions and allow the access to many information regarding the employees (Cassidy et al. 2013). This information thus becomes available to both managers, employees, and HR and potentially increases productivity while enhances the organization's competitiveness (Johnson and Gueutal 2011; Levensaler 2008).

The possibility to combine wearable technologies with participatory online performance appraisal systems that potentially would make the employees' information even more rich and available to the organizational actors raises a certain number of opportunities and concerns. Considerations regarding opportunities and risks regarding the introduction of these technologies with respect to workers performance appraisal have been organized through a SWOT analysis. According to Kotler and Armstrong (2010), in a SWOT analysis the aim is to find a way for matching strengths with the opportunities owned by a given entity, overtaking its weakness and minimizing the threats. More precisely, strengths are those internal resources that an entity owns and

that can help it to achieve its goals; weakness is its internal limitations that can interfere with the goals' achievement; opportunities are the positive trends in the environment that the entity could play on; while threats are negative trends in the environment that could limit progress. As underlined by Rapp (2014), although this kind of analysis has been generally employed for investigating the elements influencing a firm's competitive position, it has also been employed for analyzing promising technologies according to a logic that guides organized human endeavor designed to accomplish a mission. Thus this kind of analysis can be very useful in the case of wearable technology implementation in the organization for purposes of workers performance assessment. See Fig. 4.1 for a summary of the analysis.

The main strengths of this technology with respect to performance appraisal may consist in the possibility to gather a huge amount of data

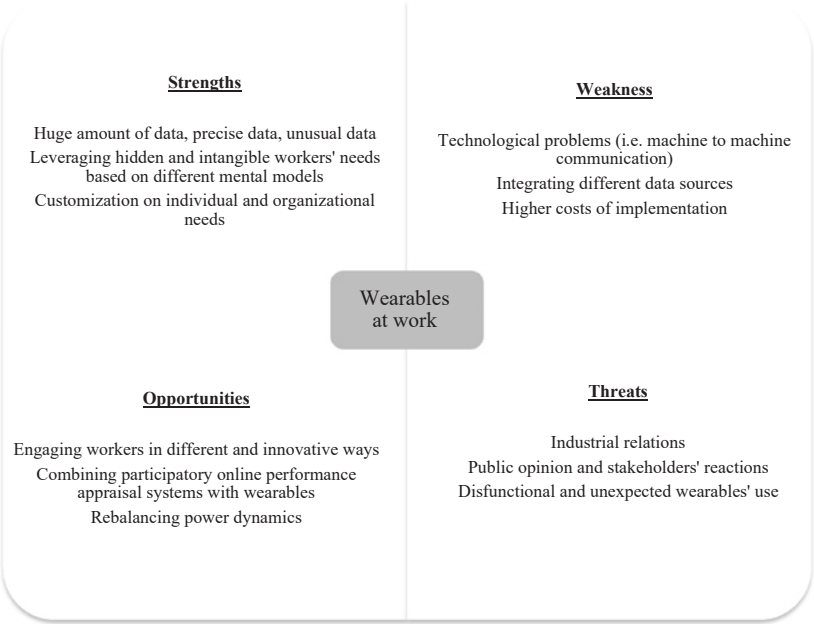

Fig. 4.1 Wearables technologies and performance appraisal: strengths, weakness, opportunities and threats

from the employees' bodies and behaviors. Further, it can be employed also in a logic that leverages the workers' hidden and intangible needs, directly involving motivational aspects. It may offer the possibility to relate a worker' specific mental model to specific groups of data to be gathered and the ways to gather them. The tool could be customized on the single individual, group, and/or organization in order to achieve specific performance goals. Along with these strengths there are some weak points too. Firstly, there can be problems related to technological difficulties in implementing systems composed by different technologies—the online performance appraisal system and the wearable device—really able to easily communicate to each other (machine-to-machine communication). Then, there may be high costs of implementation and difficulties in achieving only the needed information along with constraints when it comes to integrate different data coming from different sources. The opportunities of these instruments may consist in enabling new power dynamics within the organization finally leading to better individual as well as organizational performances. Another opportunity may consist in engaging workers in different and more innovative ways. Furthermore, the possibility to connect forms of self-appraisal to the use of wearable device could mitigate potential negative reactions to these tools from the workers' side. The main threats may regard industrial relations policies, potential negative reactions from the public opinion and from the stakeholders involved, together with a dysfunctional and unexpected use of such instruments from both managers and employees.

As we have seen, using wearables at work could imply a reinforcement in the control exerted on the whole employee together with a reinforcement of the employee' self-control. However, at the same time, it means the possibility for the company to work with a greater number of information in a more efficient way, improving the general performance. In order to reduce the employees' feeling of "oppression" due to the constant monitoring, while at the same time improving their performance, an organization can consider to: (i) employ these tools in a gaming logic, i.e. by organizing internal competitions for example regarding the number of steps taken by each employee or groups of employees. Adopting a gaming logic could be very useful

also for creating more informal relationships among employees belonging from different company's Departments; (ii) introduce these tools together with a carefully designed communication campaign aimed at presenting the logic and the vision behind the decision to adopt this specific kind of tool (i.e. real-time monitoring, detecting falls/danger, stimulating physical activity within wellness programs, etc.). In general, the main risks of feeling of oppression and the greater demand for self-control can be partially avoided by the opportunities of improving internal interactions and innovation by adopting a gaming logic, depending on the purpose for which the wearable devices are adopted, and encouraging participation through a carefully designed communication campaign.

Certainly, the payoff for well-designed workplace monitor can be significant: as noticed by Lohr (2014) and Wilson (2013) through these tools it is now possible to increase production and benefits by measuring exactly the employee performance. But workplace surveillance is not neutral and it has organizational consequences, as it impacts on the employee well-being, work culture, productivity, creativity, and motivation (Ball 2010). Thus, if the organization goal remains to improve workers' performance, how does the emotion and perception of the "extremely monitored" employee really affect his/her work performance? This still remains an open question. When looking for the answer, it is important to always bear in mind that any new technology into a firm requires a set of highly interactive and complex processes involving a network of relationships among stakeholders, such as managers, employees, and IT professionals (Stanton and Stam 2003).

Concluding Remarks and Future Research Directions

This theoretical contribution tried to shed light on constraints and opportunities related to wearable technologies employed in the organization by particularly investigating their role and implications for the

design of workers performance appraisal systems. Wearable devices at work are a very recent research field. Within social sciences, in particular, there are still only few studies that try to investigate in a systematic manner the effect of wearable devices on the individuals and their practices of use (the over decennial work done by Lupton represents an excellent exception). However, this field of research has been widely studied by those computer scientist belonging to the human–computer interaction field. Here, significant contributions focused on the relationship between technology and people as well as between technology, organization, and the individual. Shifting the focus from computer to social and organizational science, this work offered a reflection from a business organization perspective. Future research could deepen the relationship between wearables and workers performance appraisal through empirical studies where wearable devices are pervasively applied and their applications in-depth are analyzed through quantitative as well as qualitative research methods.

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5

Work Performance and Organisational Flexibility: At the Core of the Employment Contract

Elena Gramano

Introduction

Rapid technological development, new ways of offering services on the market through websites, digital platforms, online providers, the fragmentation of the employer's roles into groups or nets of companies that share decisions and processes often outside formal relationships of control or of capital sharing, the mechanisation of working activities through new technologies, and the increased level of skills required of workers in the labour market: all these factors seem to have caused a crisis regarding the traditional legal parameters of the classification of work, challenging the dogmatic categories of subordinate and autonomous work.

The problem of the **classification**—between **subordination** and **autonomy**—of working relationships between companies that are

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_5

increasingly disintegrated (Collins 1990; Davidov 2004; Barbera 2010; Weiss 2016; De Luca Tamajo 2007; Voza 2017) and their "collaborators" is certainly not new (De Stefano 2016; Biasi 2017). Legal scholars and case law have long addressed this issue with reference to relationships that can hardly be described in terms of the archetype of an employee who is subject to the precise direction and penetrating control of a unique and clearly identifiable employer (Prassl 2015; Prassl and Risak 2016).

However, the legal problems caused by the **technological and economic changes** have often been viewed exclusively from an external perspective: the labour market has been analysed by considering the different contractual models used by the economic subjects to exchange work and remuneration from a point of view that has mainly stayed outside the boundaries of the employment relationship. Issues related to the need to move beyond the subordinate employment relationship, to enlarge its scope of application and to identify new contractual forms to regulate non-standard work have been addressed from different perspectives, and various solutions have been offered.

Nevertheless, the very same factors which are shaping the labour market, driving it to articulate itself in different sub-markets that relate to different non-standard forms of work, are influencing the employment relationship itself. Even "inside" the most regular and clearly **subordinate employment contract**, such factors are profoundly changing the ways that employers and employees execute their relationship. Therefore, such phenomena create the necessity to rethink the scope of application of employment law and the non-standard forms as work, as to adjust the employment contract to meet the needs of organisational flexibility, for example, with reference to the working time, but also, and—I would say—before anything, with reference to the duties the employee is required to perform, the evaluation of such performance, and the connection between the working activities and the employer's organisational prerogatives recognised by the law.

In the current rich theoretical and media debate, the need to adopt an approach aimed also at focusing on the core of the employment relationship has not been left with much space, given the growing *vulgata* that the overwhelming evolution of information technology is destined

to produce the overthrow of the very concept of subordination and stable work, instead giving space to work that is structurally detached from the organisation of the enterprise.

Consistent with this key of interpretation, a substantial body of literature—developed especially in the Anglo-Saxon world—has addressed "on demand" work over the past few years (Davidov 2017; Prassl and Risak 2016; Codagnone et al. 2016; Berg 2016; Tullini 2016; Dagnino 2015; Donini 2015; Aloisi 2016a, b; Ratti 2017; Voza 2017; Biasi 2017; Cherry and Aloisi 2017; Finkin 2016; Cherry 2016; Stafford 2016; Holloway 2016; Rogers 2016; Carboni 2016; Cunningham-Parmeter 2016).

The first aim of this paper is to provide evidence of the fact that **subordination** is not inconsistent with the changes that are deeply influencing our society and ways of living and work. Instead, it is my opinion that the **employment contract** was originally conceived and still is one of the most flexible legal tools for the regulation of work relationships: a tool that has internalised **organisational flexibility** as a core feature of the employment relationship.

Pursuant to this view, reconsidering the employment contract and its relationship with the concepts of organisation and of performance might be one of the keys for examining the new forms of work as well.

In this context, I believe that the Italian reform introduced by means of different pieces of legislation between 2015 and 2017 is a good example. The first choice of the Italian lawmakers was to re-centralise the classic model of employment (i.e. the open-ended subordinate employment relationship) by updating the regulatory framework to adapt it to the transformation of the economic and productive context in which companies operate.

The Italian legal system reacted to the recent trends by introducing deep changes in the regulation of the subordinate employment contract in order to allow for the complete development of the permanent employment relationship beyond the organisational model of the Fordist-type enterprise. This enables employers to unilaterally adjust the contract's object to their variable business needs and enables employees to work ordinarily outside the company's premises and the pre-defined working hours, thus also regardless of the time made available to the entrepreneur.

In particular, the most relevant changes, which reflected the need to increase organisational flexibility, were introduced by Article 3, decree No. 81/2015 on the regulation of the employers' managerial prerogative to unilaterally change the duties for which the employee has been hired (*jus variandi*).

Such normative interventions highlight the basic assumption that organisational flexibility is no longer inconsistent with the regular standard subordinate employment contract.

The organisational needs to enter the contract, which becomes changeable under conditions no longer set by the law, but rather by collective bargaining agreements or by the parties themselves.

In such a renewed legal context, subordination continues to be the answer to the need for the regulation of the working relationship, even in a market that is rapidly evolving and expanding outside of national or continental boundaries, but still reflects a capitalistic system in which the capital itself and the labour belong to different subjects that meet in a free market.

Employers' Managerial Prerogative to Unilaterally Change the Employee's Duties (*Jus Variandi*)

Employers' managerial prerogative to unilaterally change the duties for which the employee has been hired (***jus variandi***) is acknowledged in most of the countries where legislation on the employment relationship exists. Such prerogative allows employers to adjust their employees' **performance** to their changing business needs according to different organisational schemes that represent the results of the employers' choices.

This fundamental legal tool has unquestionably been disregarded or underestimated within the analysis and legal research regarding fair flexibility in the employment relationship, especially in an economic context in which technology is changing dramatically and in which professional skills need continuous updating to keep up with the evolution of robotics.

The concept of flexibility has been analysed in the scientific literature by several legal and economic scholars in recent years, especially in terms of outgoing and incoming flexibility. Also lawmakers' approval of labour market reforms over the past decades focused their attention on the identification of contractual instruments that allow an easy entrance into the enterprise, such as, for example, the possibility to hire employees using non-standard forms of employment. Secondly, lawmakers focused most of their attention on dismissal regulations, and rethinking and loosening the limits thereof, in order to develop legal solutions that would allow companies to benefit from greater flexibility.

Within this broad debate, the analysis of functional flexibility or flexibility "inside" the employment relationship, namely the possibility to rapidly adjust the business activities of a firm to its changing needs, has largely been disregarded.

In this context, the paper aims primarily at studying the employment agreement from an internal point of view—namely, the possibilities for the parties to change and modulate the content of the agreement—instead of an external point of view—the possibilities for the parties to enter the relationship by means of an atypical contract and the possibilities, particularly for the employer, to easily terminate the employment contract.

In the background of such reflections is the role of **collective parties** and their reciprocal relationships. **Collective bargaining agreements** appear to be the most suitable legal tool for regulating the parties' reciprocal positions and, at the same time, for keeping the regulation updated with respect to the newest technological evolutions.

The new Italian regulation of *jus variandi* represents an interesting way to insert into the functional flexibility of the employment relationship an underestimated path towards employability and the protection of employees by stressing the role of collective parties and their reciprocal relationships.

Italian lawmakers have found that extending the role of collective parties in defining the duties and rights of the parties to an employment contract leads to "controlled flexibility" in which managerial prerogatives are exercised within the limits of the collective bargaining agreements.

In this sense, such agreements appear to be the most suitable legal tool for regulating the parties' reciprocal positions and, at the same time, for keeping the regulation updated with respect to the newest technological evolutions.

A Premise

The legislative regulation of *jus variandi* prior to the 2015 reform did not in itself constitute a limit on the pursuit of an efficient business organisation by changing the roles and tasks required of workers. The "equivalence principle" provided for by Article 2103 of the Italian Civil Code, as introduced by the Workers' Statute (Law No. 300/1970)—according to which an employee could have been assigned to the duties established in the employment contract as to any other duty equal to those ones—was, in fact, a limit which was also open and flexible, because—perhaps not by chance—the lawmakers had not specified which profiles between the tasks of origin and those of destination should be taken into account for the purposes of judging their *equivalence*. This is borne out by the fact that the interpretative solutions to the problem of defining the concept of equivalence have been many and varied.

However, a particularly rigid interpretation of the provision—interpreted in terms of protecting the **professional skills** already acquired by the worker—has clearly prevailed, without contemplating any openness towards new skills. This interpretation, anchored in the protection of the worker's "know how", produced the rigidity of the regulation, against which the only alternative has been that of the (creative) construction of hypotheses for the derogation from the same provision.

The jurisprudence, ignoring the warnings of the doctrine on this point and with few exceptions, settled on a notion of equivalence such as to prevent any movement that could compromise, even partially, the already matured competences of the worker in a static and completely anachronistic vision of companies' **organisation**, and on the basis of a hermeneutical approach that did not allow openness, almost as if the acquired professionalism was a natural and indisputable concept.

In view of this approach, which undermined the very subjective position of the worker in the face of changes in the structure and needs of the undertaking, the case law only occasionally allowed a rethinking of its interpretative findings, believing that the route of derogation from a clearly mandatory rule was easier to follow. It was precisely by following this path that the so-called "demotion pact" was first accepted and the legitimacy of the clauses that allow for fungible set of duties, created by collective bargaining was subsequently recognised.

Taking into account the pre-reform landscape, its distance from the "new" organisational needs of companies was clearly perceived. This has been confirmed, not for the construction of the legal discipline—which was limited to a boundary, that is, equivalence, which could be interpreted in different ways and which could well have reconciled the requirements aimed at the protection of the worker's person with those aimed at flexibility—but rather, for the way in which this discipline has traditionally been applied by judges.

In particular, the case law only partly recognised the central importance of the contribution that collective bargaining could have made to the regulation of tasks. Not only did judges for employment traditionally hold that the place of the duties in the same professional classification could not be said to be sufficient to consider the condition of equivalence as integrated, they also considered that the imposition of the nullity of contrary agreements, referred to in the second paragraph of Article 2103 of the Italian Civil Code, should be extended to collective agreements.

In light of the foregoing, it emerges that the regulation structure was particularly rigid, despite the continuous demands of the scholarship and despite the attempts to modernise the models for the classification of personnel in collective bargaining.

It was therefore the lawmaker which had to take on the requirements for flexibility in relation to ***jus variandi*** by means of a radical amendment to Article 2103 of the Italian Civil Code. The amendment acknowledged that internal flexibility constitutes an inevitable reflection of the dynamic structure of an organisation, which must constantly respond to the demands of the market, technological innovation, the external environment, trade union pressure and other elements,

the most important of which is connected to the fact that a productive organisation generally has a predominantly human component (Liso 1982).

The Ordinary *jus variandi*: The New Role of Collective Bargaining Agreements

The recent reform of Article 2103 of the Italian Civil Code seems to have identified the appropriate instrument for balancing the parties' interests in the governance of employers' prerogative to unilaterally change their employees' duties in the **collective bargaining agreement** (Liso 2015), which is essentially entrusted with the task of regulating that power (Zoli 2015).

This was a response to a longstanding call from a large part of the scholars (Liso and Rusciano 1987; Liso 1982, 1987; Magnani 2004; Ichino 1992; Brollo 1997; Pisani 2013; Ghera 1984; Treu 1989; De Luca Tamajo 2008; Zoli 2014; Liebman 1993), which have mostly welcomed the decision to place collective agreements at the centre of the discipline (Zoli 2015; Liso 2015), while not failing to highlight the critical aspects of the new provision.

The rule certainly maintains the principle of the contractual nature of the **working duties**, which is confirmed by the first part of the new wording of Article 2103 of the Civil Code, which states that "*the worker must be employed for the tasks for which he has been engaged*", and therefore, for the tasks crystallised in the employment contract at the time of recruitment.

The reference to the tasks identified by the individual employment contract was essential in the framework of the previous regulation, in which this represented the parameters of the relationship in order to anchor the assessment of the equivalence of the new tasks to which it was lawful to assign the worker in the exercise of *jus variandi*. However, today, this reference has lost its role as the "lower limit", as it is accompanied by the widest reference to the "*tasks ascribable to the same level of the collective bargaining and legal category of the last ones*".

The duties indicated in the contract at the moment of the hiring define the initial classification of the worker. The employer may, in fact, legitimately assign the worker to all the tasks included in the same level of the collective agreement as the initial tasks and included in the same legal category, which are articulated in Article 2095 of the Italian Civil Code (so far unchanged) (Brollo 2015; Tiraboschi 2015).

The reform essentially entrusts to the national, territorial or company **collective bargaining agreements** entered into by the trade unions, which are comparatively more representative at the national level, or to the company collective bargaining agreements entered into by the company's union representatives (according to the definition, valid for the entire decree given by Article 51 of Decree No. 81/2015), ultimately, the identification of the employee's boundaries for fulfilling the employment contract, and specularly, the identification of the employer's **power** to change the object of the contract. The collective agreement is thus placed at the centre of the system as an instrument to limit the employer's power to modify the tasks, in relation to which the law merely acts as a source of delegation, but is not concerned with regulating cases in which there is no collective agreement.

At a first reading, as argued by the doctrine addressing the point, the new provision seems to mark a radical break with respect to the previous discipline (Carinci 2015; Ferrante 2015; De Feo 2015). In fact, it eliminates the condition of legitimacy laid down in the Workers' Statute (Law No. 300/1970) of the equivalence of the new tasks to the previous ones, instead merely requiring that they have the same level of contractual classification (Gargiulo 2015).

There are, however, those who have considered that the absence of an express reference regarding the parameter of equivalence does not imply that it will no longer act as a limit on the power of employers, because equivalence will continue to represent the parameter, albeit implicit, to which the exercise of *jus variandi* must continue to anchor itself. According to this thesis, in view of the fact that the employee might be assigned to tasks not expressly covered by the collective agreement, the interpreter will in any case have to use an evaluation criterion which takes into account the value of new tasks compared to the "last ones actually performed", thus applying again the principle of equivalence which,

accompanied by the legislator's little politeness to the door, is destined to be overbearing from the window of the judge (Gargiulo 2015).

On this point, it has been pointed out that while judicial control certainly cannot be excluded in the event of a gap in the collective agreement over the actual correspondence between the tasks actually performed by the worker and the contractual framework formally recognised, this cannot prevent the recognition of the obvious fact that the **principle of equivalence** in terms of **professional skills** acquired by the worker has been abandoned and gives way to the mere traceability of the tasks at the same level of the collective bargaining agreement (Zoli 2015; Liso 2015; Brollo 2015).

Faced with the rigidity of the provision set forth in the Workers' Statute—or, better still, with the particularly restrictive interpretation of the limit on equivalence provided by the case law—the question has arisen of adapting the guarantee of Article 2103 of the Italian Civil Code to the need for greater flexibility deriving from the increasingly penetrating integration of production systems. Faced with this need, the courts moved in a direction which, even before the 2015 reform, appeared to be more and more difficult to justify from the point of view of consistency with the wording of the norm.

From this point of view, the reform of Article 2103 of the Italian Civil Code is in line with the policy of law which, in response to the demand for flexibility in the regulation of employment relations, can be seen in the so-called "controlled flexibility" or "negotiated flexibility" (Tursi 2013), which is the best instrument for regulating relationships, as an alternative to the simple reduction or repeal of the protective legal discipline: the technique used to implement this policy of law is the legal reference to collective bargaining.

Of course, the new Article 2103 of the Civil Code has created a number of new problems. When the reference to equivalence was eliminated, a qualitative parameter disappeared which, although difficult to apply, nevertheless identified a guiding criterion for the interpreter. The oracle of the law is now the collective agreement, to which the primary legislation has delegated the identification of the category of the tasks to which the worker can be validly assigned; this identification must be carried out through the contractual classification of the tasks.

The Extraordinary *jus variandi*

The new provision provides for the possibility of a unilateral prerogative of the employer to assign the employee to tasks at a lower level of classification than those in the recruitment or those last performed, provided that they fall within the same legal category. The first condition for the legitimacy of the "downward" movement is the existence of a change in the company's organisational structure that affects the position of the worker. The provision specifies the limits and conditions that must be met: first, the employee must be notified of the change in duties in writing; otherwise, the act will be null and void. The written form must also be understood as requiring the explicit specification of the changes in the **organisational structure** that justify the demotion in order to allow the verification of its legitimacy. Secondly, the worker has the right to maintain the level of the collective bargaining agreement (which identifies more generally the economic and normative treatment applicable to the employment contract) and the remuneration in use, with the exception of the compensation elements of the wage linked to the particular methods of performing the previous duties. Employers are therefore obliged to bear the cost of the demotion, because they cannot reduce their employees' level of remuneration.

The **demotion**, moreover, can only extend to the level of classification immediately below that in which the last job performed is placed; the descent of further steps in the level of contractual classification is not allowed under these conditions. Moving outside the boundaries of the legal category to which it belongs, as defined by the Article 2095 of the Italian Civil Code, is also not allowed.

In this case, a fundamental role is also played by the collective agreement, which, in articulating the boundaries between the different levels, will condition *jus variandi* in the sense of whether or not the further internal limit of the necessary objective justification is imposed on it.

A second, alternative condition for the legitimacy of the demotion is represented by the set of further hypotheses for the assignment to tasks belonging to a lower level of classification, although within the same legal category, which can be provided for by collective agreements (Zoppoli 2015). Also with reference to these further hypotheses, the regulation

specifies that the change in duties must be communicated in writing, on the pain of nullity of the decision. Further, the worker has the right to maintain the level of remuneration in use, with the exception of the elements of remuneration linked to the particular modes of performance of the previous work. Even with reference to these hypotheses, the demotion may not extend beyond the level of classification immediately below that of the last job performed or beyond the boundaries of the legal category.

Collective bargaining is ultimately entrusted with the task of defining the limits of *jus variandi* which has been defined as ordinary and is located within the boundaries of the classification of the tasks established in the employment contract or those actually performed in the last job (Article 2103, paragraph 1 of the Italian Civil Code) and of regulating *jus variandi* which has been defined as extraordinary, in that it is entitled to move towards the lower contractual classification (Article 2103, paragraph 4 of the Italian Civil Code).

As a result of the silence of lawmakers, collective bargaining is free to regulate the further hypotheses for demotion (Voza 2015), because it may well exceed or otherwise regulate the condition of a change in the company's organisational structures that affects the position of the worker, as per paragraph 2 of Article 2103 Civil Code.

This confirms the legislature's willingness to recognise the collective agreement as the main regulator of the power of *jus variandi*.

The third and last hypothesis for a lawful demotion, regulated by the sixth paragraph, is that in which the individual parts underwrite, in one of the so-called "protected situations" referred to in Article 2113, paragraph 4, of the Civil Code, or before the certification committees pursuant to Article 76 of Legislative Decree No. 276/2003, agreements amending the duties, which may also involve changes in the legal category and the level of remuneration, where stipulated in the abovementioned places and in the interest of the worker to maintain employment, acquire a different professional status or improve her living conditions.

The widening of the boundaries for the possible demotion, which can extend to all levels of classification that are lower (and not only to the one immediately below), and which may also involve a change in the legal category and, above all, in remuneration, have been accompanied

by two types of limits. A formal limitation requires that the agreements must be concluded in a protected forum. A substantial or objective limitation requires that the agreement must be concluded in the interests of the worker to maintain employment, to acquire a different level of professionalism or, ultimately, to improve her living conditions.

This is certainly the most complex norm within the provision in question, which also stems from the difficult distinction between the situation referred to in the sixth paragraph and that referred to in the second paragraph—described above—in which demotion is allowed in the face of changes in the organisational structure of the employer (Liso 2015).

With reference to the limits of a formal, or rather procedural, nature, the law entails the nullity of all agreements that are entered into outside the protected locations that lead to a worsening of the classification beyond the level immediately below or beyond the limits of the legal category, or even if they fall within these boundaries, are not justified in light of the collective provisions. The restrictions on the purposes laid down by the provision have also been interpreted as alternative preconditions for the validity of the agreement, which is null and void within the meaning of the ninth paragraph of Article 2103 Civil Code if it is concluded for the pursuit of employee interests other than those expressly stated (Voza 2015).

In any case, the meaning to be attributed to these constraints has raised a number of concerns. In particular, it has been noted that the "worker's interest in maintaining employment" (paragraph 6) in itself implies a "change in the company's organisational structure which affects the worker's position" (paragraph 2): the latter situation certainly occurs when the job ceases, so that a demotion is the only alternative to dismissal as a justified objective reason (Zoli 2015; Brollo 2015). Hence, the difficulty in distinguishing this hypothesis from that provided for in the second paragraph of the provision, which nevertheless legitimises, as we have seen, a unilateral act by the employer of an assignment to lower management duties and does not require compliance with any formal condition.

With reference, then, to the worker's interest in acquiring a different professionalism, a reference to the case law attempt (rather isolated, for

the truth) to enhance the possibility that the worker may be assigned to lower tasks within the framework of an on-the-job retraining process might be imagined (Voza 2015), although it is not clear what the advantage could be for the worker, in the face of a permanent demotion which may also involve the reduction of pay, in the stipulation of such agreement.

Given the type of interests that the agreement must pursue under penalty of nullity (Voza 2015), it will be particularly complex to define both the role assigned to the parties called upon to assist the worker's will in concluding the agreement and, above all, the role that the judge may be called upon to play in the face of an appeal against the agreement. In the writer's opinion, the examination of the legitimacy of the pact must be limited to the profile of the abstract compatibility of the content of the agreement with the declared aim, because the verification of the actual achievement of the same purpose—by its nature, not necessarily its immediate realisation—may not have a positive outcome, even in cases involving a virtuous agreement.

The Sanctions

The ninth paragraph of Article 2103 of the Italian Civil Code provides that, unless the conditions set forth in the second and fourth paragraphs are met, and without prejudice to the provisions of the sixth paragraph, any agreement contrary to the provision is null and void (Fontana 2015). An illicit demotion will occur whenever the employer exercises her *jus variandi* outside the limits and conditions set forth by the law.

It should be noted that the principle that employees are generally entitled to be classified in the legal category and the level of employment that correspond to the specific duties they have actually performed remains generally firm, now, as in the past. This is the principle of the so-called "effectiveness of the tasks" (Pisani 2013; Ghera 1984), which certainly cannot be said to be affected by the new regulation of *jus variandi*, which makes specific exceptions to this principle (demotion following the existence of changes in the company's organisational structure or provided for by collective bargaining), however, in

a direction favourable to the worker, because an assignment to perform lower tasks will not achieve a downgrading of the worker, who will continue to have the right to the economic and regulatory treatment provided for. With this exception, however, the rule requiring the necessary correspondence between the specific duties and the management is confirmed. An unlawful demotion will therefore occur whenever the worker is actually assigned to tasks included in a lower classification level than that which is formally recognised for him/her and which does not fall within one of the cases expressly regulated by the new Article 2103.

The consolidated case law, according to which the logical-legal procedure aimed at determining the classification of an employee is developed in three successive phases, i.e. ascertaining the actual work activities carried out, identifying the qualifications and grades provided for by the collective agreement and comparing the results of the first investigation with the texts of the contractual regulations identified in the second, is therefore of ongoing relevance.

Conclusions

The old regular standard employment contract is often perceived, at the same time, as a virtuous model to which one can aspire and as a phenomenon in the process of exhaustion (Del Conte 2015).

The labour law of the last twenty years has been subject to numerous reforms, during which the legislature has concentrated on different aspects of the labour market, without ever changing the regulation of the employment relationship itself.

In the Italian legal system, previous legislative measures initially involved the so-called incoming flexibility, encouraged by the identification of **atypical types of contracts**, whose numbers have increased over time, in the belief that the offer of contractual instruments alternative to the standard employment contract was an effective method of supporting employment. In a second phase, starting with the so-called Fornero reform (Law No. 92/2012) and ending with Decree No. 23/2015, the focus has shifted to outgoing flexibility, through changes in the

regulation of individual and collective dismissals, with the view that a reshaping of the sanctions for unlawful dismissal can result in an incentive to recruit and hire.

The regulation of the employment relationship was, however, definitely neglected. Faced with a felt need for renewal and the adaptation to changing market needs, the response has always been sought in the market itself. Mobility in the labour market was stimulated on the assumption that greater freedom of action for employers in entering and leaving the employment relationship would entail an incentive to take on employees (through contracts other than employment contracts) and, therefore, would lead to an increase in employment.

Such approach has been partially inverted by the latest pieces of reform that for the first time after decades addressed the core of the employment relationship.

The paper analyses the latest innovations of the Italian legal system in the regulation of the employer's *jus variandi*, as amended by Article 3 of Decree No. 81/2015.

The final objective is to provide evidence that a new concept of organisation is emerging: an organisation that becomes part of the very reason that underlies the employment contract, which not only implies an exchange of a certain working activity for remuneration, but rather the exchange of skills and the flexibility to perform different duties for remuneration (Napoli 1997; Alessi 2004; Galantino 1998; Marazza 2002; Guarriello 2000).

Such new concept is made possible primarily by acknowledging that collective bargaining agreements are now entitled to regulate the very object of the employment contract.

A central role might still be played by the employment contract as a tool to reach the organisational needs of the company in order to face the technological changes that are dramatically reshaping the ways of working.

In light of the foregoing considerations, it is evident, first, that there is an undisputed functionality of subordination to meet the need for flexibility in productive organisations.

This does not refer to the "quantitative", i.e. the possibility to adjust the number of workers to the business need, but rather to functional

flexibility, i.e. the ability to quickly adapt one's own production organisation to market requirements.

This type of flexibility, which has always been necessary in the exercise of entrepreneurial activity, is even indispensable in view of the characteristics of the post-fordist production system, in which responding quickly to fluctuating market demands is essential. The employment contract regulation, as now designed by the new legal interventions, which allows the employer to unilaterally adapt and modify the working duties in a way that is precluded from recourse to any other contract, seems necessary in order to obtain functional flexibility.

The employment relationship remains at the core of the labour market as the tool that can efficiently allow those who organise an economic activity to address rapid change, while using technological means.

This is not meant to be an anachronistic statement, far from reality and bound to a non-existing status quo. It is certainly true that work is increasingly precarious and that "having a job" is no longer an insurance against poverty and a mean to reach social safety (*The Guardian*, 23 January 2018, *Post-work: the radical idea of a world without jobs*).

The distinction itself between who owns capitals and who offer her labour is blurred and intangible, given the complex controlling relationships between economic subjects, that can't no longer be exclusively described in terms of property.

However, the distinction between who organises work and takes advantages from it and who offers her working performance is there, clear and still.

Substantially subordinate work is the source of living for most of the world population. And if it is true that work, as we know it, is a relatively recent construction of the modern age meant to decline over time, I believe this time is not here yet, since yet we do not have thought of any better mean to allow people to get their living while being free, learning, changing, associating, bargaining and collectively and individually expressing their will.

We might have to deal with a type of work that stays outside the boundaries of the companies, outside the boundaries of any physical place; a work that travels through algorithms and produces outcomes in different sides of the globe.

However, the subordinate employment relationship cannot be defined as anachronistic and maintains its fundamental regulatory role in the discipline of the working relations.

Paying little regard to issues connected to functional flexibility does not seem justified, since the employees' capabilities of improving their future employment conditions, particularly in terms of employability, largely depends on business organisation models and on the continuous technological changes, rather than on making recourse to non-standard forms of employment or loosened protection against dismissal.

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Part II

Monitoring, Digital Tracking, Ratings and the Appraisal of Work Performance

6

Employee Privacy in the Context of EU Regulation 2016/679: Some Comparative Remarks

Federico Fusco

Introduction

Nowadays the resort to an increasing number of electronic devices and new technologies has become an essential part of the organizational scheme of every firm. Personal computers, smartphones, tablets, but also Gps locators, various systems of remote control and a massive utilization of internet and internet-related programs has totally transformed the way of working, with unquestionable benefits in terms of simplification of the working tasks and augmentation of productivity. However, beside those positive effects there are also some negative ones. In fact, from one hand the availability of multitasking tools (such as a computer with internet connection) allows the worker to perform nonworking-related activities (Melgar Martinez 2016, p. 1; Rodríguez Escanciano 2015, p. 14); from the other most of those instruments keep records of the employees' operations, thus clashing with their right to privacy.[1]

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_6

The second aspect deserves a special attention because the worker in order to fulfill its duties, must necessarily "enter" into a productive environment organized and controlled by the employer. For this reason in the execution of the labor activity are involved also a large number of personal situations[2] that, being irrelevant for the fulfillment of the duties, must be protected against undue intrusions.

This necessity has a very strong legal basis in the European Convention of Human Rights, whose art. 8 imposes the respect for private and family life. In fact, as pointed out by the Grand Chamber of the ECHR in Case Bărbulescu v. Romania of September 5, 2017, the abovementioned right could be violated by some forms of "hard" control.[3] Moving from the abovementioned consideration that the worker necessarily brings in the workplace an important part of his personal dimension, the Court set the basic principle that the employer's rules cannot be so restrictive to eliminate the private social life at work. It is then important to find a balance between the interests of the firm (that must be able not only to control the fulfillment of the employee's duties, but also to collect data concerning the working activity in order to increase its competitiveness) and the worker's right to maintain a "safe zone" sheltered from external interferences. For this reason, the judges pointed out some parameters to ensure the safe coexistence of the opposite rights. First of all the worker should be clearly informed of which conducts are forbidden (as for example a private use of company resources) and about the possibility for the employer to carry out the pertaining controls. Those information must be provided in advance, should be specific enough to identify the forbidden actions and must state which kinds of control can be realized. Thus, we can stress that such requirements aim to create a "legality principle", allowing the worker to know what he can and cannot do and in which ways and to what extent his personal sphere can be checked by the employer.

However, those requirements alone are not sufficient to protect the worker's fundamental right, because the employer would still be able to establish a very invasive form of control simply providing a full information about that. For this reason, the decision points out other conditions such as the need to justify the more invasive forms of control (such as a check on the content of the communications) with a

legitimate reason, the connected duty to resort to the less intrusive one and the need of a coherence between the declared aim of the control and the way its results are used.

Briefly, for the Court of Strasbourg there is not a sharp border between the opposite rights of employer and employee and the conflict should be solved applying the principle that the former should do everything is possible to impact in the smallest way the personal life of the latter.

Thus, the legitimacy of a form of control is related to the process leading to it: as a general approximation we can state that if the employer shows that the control is relevant for its activity and that there were no other less invasive solutions, that type of control would be, probably, legal. In this respect, as clearly pointed out by the Court, the preventive information concerning the modalities and purposes of control has a greater relevance.

Moving to the EU legal framework we can notice that this topic is primarily regulated by the acts concerning the personal data protection. The fundamental principles are settled by art. 8 of Charter of fundamental rights of the EU and by art. 16 of the Treaty on the Functioning of the EU,[4] but it is mainly in Regulation n. 2016/679 that they are implemented.[5]

This quick analysis shows that, following the major international norms, the question of how to balance the employer's interest to increase productivity also using new technologies that allow a major control on worker's activities and the worker's right to do not be subjected to a constant monitoring it is not regulated by any specific labor law provision and, instead, must be solved using the (general) rules on the data protection.

Nevertheless, the EU's legislator shows to be aware that the labor relationship could need some specific regulation and at art. 88 of GDPR specifies that Member States "*may, by law or by collective agreements, provide for more specific rules*" to be applied in all the events related to the employee's condition (such as hiring process, staff management and dismissals). This provision is certainly good both for allowing more restrictive rules when the data concern the workers, both for explicitly referring to the social partners' self-regulation in order to

identify those rules. However, on the other hand, the big discretion left to the Member States not only concerning the set of rules to put in place, but, also, regarding the eventuality itself to implement them risks to create an extremely variegated set of standards, thus fostering the social dumping between different Countries.

Moving from those consideration this contribution will study the abovementioned topic in the Italian, Spanish and Swedish experiences underlining the effects that could derivate from different sets of rules.

The Italian Solution: A Specific Rule to Protect the Employees and the Uneasy Coordination with the Privacy Act

Starting from the Italian legal frame it should be pointed out that this is the solely Country, among the one that will be studied, to have an additional and specific legislation concerning worker'ssurveillance. Since 1970 the subject is ruled by art. 4 of the so called "*Statuto dei lavoratori*" which in its original version forbade the installation of every instrument who could have led to the remote control of workers unless if it was preventively authorized by the trade union or by the Labour Inspector Authority. Moreover, even after the authorization it was not clear for what goals the collected information could have been used for. This situation led to a major legal uncertainty and to the consequential practical problems, especially because of the great number of Court's decisions not always moving in the same direction.[6] Particularly difficult was the application of the act to the new technologies based on electronic devices and internet.[7] For example even a simple magnetic badge to be swiped at the beginning and at the end of the working day was considered by some judges as an "instrument of remote control",[8] with the result to consider void the disciplinary dismissal based on the data collected by it if its installation had not been previously authorized by the trade union.[9]

The d.lgs. 151/2015 updated the norm to the contemporary reality, not only reducing the constraints in the organization of the firm,

but under certain aspect also making it easier to remotely control the workers.[10] While with the previous norm the lawful uses of the collected information remained unclear,[11] now it is stated that they can be used for all the purposes related to employment relationship, under the condition to comply with the privacy law.

As a result nowadays it exist an interesting duality: the installation of devices that can allow to remotely control the workers is regulated by a specific provision (paragraphs 1 and 2, which in some cases still require a preventive authorization), but the use of the collected data solely requires the respect of the privacy law.

This double level of protection aims to provide a greater protection compared to the one settled by the international norms. In fact, the EU privacy regulation[12] is integrated by a specific provision addressed to the employment relationship limiting the possibility for the employer to collect data and imposing in many cases the consent of the trade union or of a public administration for the installation of the recalled instruments. However, the importance of this provision can be understood only analyzing how it is implemented. In fact, it is a widespread practice that the agreement authorizing the recalled installation (or the administrative permission), constraints such installation to several conditions concerning the practical utilization of the instruments.[13]

The second level of protection for the workers is represented, instead, by the need to process the collected data in compliance with the data protection law and, so, does not add anything to the European standard.[14]

Thus, accordingly with the art. 5 of EU Reg. 2016/679 the data processing should respect the following principles: lawfulness, fairness, transparency, purpose limitation, data minimization, accuracy, storage limitation, integrity, confidentiality and accountability. Even if the article gives to all the principles the same importance it is easy to appreciate that only the purpose limitation and accountability ones have an autonomous position. In fact, the former states that it is possible to realize a certain operation on a personal data only as long as that operation complies with the purpose to which the processing is addressed. It can be easily pointed out that the content of most of the other principles can be defined only moving from this purpose: it is possible to

minimize the data only with regard of the purpose of the processing, the degree of needed accuracy depends from the same purpose and is still with regard to the scope of the processing that must be chosen the storage time. Moreover, also the integrity and confidentiality of the data are a logical corollary of the same principle, being evident that a data breach is by itself incompatible with the purpose.[15] For those reasons, the purpose limitationlimitation principle can be defined as the ground of the controller's powers: it is the initial choice concerning the aim of the processing that identifies the permitted operations (Barraco and Sitzia 2012, p. 119).

An important innovation introduced by the GDPR is, instead, the principle of accountability. In fact, with the aim to stimulate better practices and increase the controller's freedom the new norm repeals some obligations imposed by the previous set of laws (such as the prior checking) and concentrates the activity of the Data Protection Authority only after that the processing has taken place. However, this greater freedom for the controller is balanced by the burden for the controller itself to be able to demonstrate in every moment the respect of the legal obligations. Therefore, differently form the past, it is not the inspection authority, which should demonstrate that the controller has violated some rules, but is the controller that is considered guilty if he is not able to demonstrate his compliance with all the existing obligations.

Besides those preliminary remarks, it should be noticed that the most interesting aspect of the recall made by the art. 4 l. n. 300/1970 to the privacy regulation is represented by a loop concerning the right to use in a trial information gathered violating some prohibitions.

In fact, art. 160 *bis* of the Italian Privacy Code—together with its art. 2 *decies*[16]—states that documents based on an illegal processing of personal data can be used in the trial if the procedural law provisions allow such effect.[17] This rule is the result of the implementation of the principles contained in the EU regulation which at artt. 17 and 18 exclude the right for the data subject to obtain the erasure or the restriction of processing of data unlawfully processed when the processing is necessary "for the establishment, exercise or defense of legal claims".[18] It is, then, clear that the new privacy legislation (but on this aspect it does not differs from the older one) allow to use in a legal claim personal data

coming from an unlawful process and the establishment of an eventual ban is devolved to the procedural law.

In other words, we can stress that the GDPR does not interfere with the epistemic dimension of the national trial, on whom it would probably be difficult for the EU to find any legal basis to intervene. Therefore, it pertains to each member state to decide to which extent its judiciary system should seek the empirical truth.

Under this aspect, the Italian civil procedural law does not contain any prohibition concerning illegal evidences,[19] which have then become a very sensitive matter. In brief we can point out that in the civil trial the judge has no power concerning the admission of the documents and he must, instead, ground his decision on the evidences (documents included) provided by the litigants (art. 115 c.p.c.) (Consolo 2010, p. 141). Moving from this argument the legal doctrine admits also the illegal evidences (Villecco Bettelli 2004, p. 193 ss; Pecora and Staglianò 2004, p. 724).[20]

An important exception to this principle was represented by the evidences obtained thanks to an unlawful form of control of the employee. In fact, the old version of art. 4 St. Lav. expressly banned the use of such information and a partial mitigation of this ban came only from the recalled case law on the "defensive" and "accidental" controls. In other words, the lack of an express prohibition of the use of illegal evidences in the civil trial was compensated (in relation with the remote control of the workers) by the express ban posed by the art. 4.

Nowadays, instead, the new text of this article states that the collected information can be freely used if they comply with three conditions: (1) they have been collected respecting paragraphs 1 and 2; (2) the worker has been informed about how to use the instruments and about the modalities and extent of control; (3) the information are used in compliance with the privacy regulation (Del Punta 2016, pp. 104–105). For this reason, considered that the norms concerning the personal data protection allow to use in trial data which have been unlawfully processed,[21] we must conclude that also for the extent of art. 4 St. Lav. it is possible such use.[22]

Briefly summarizing we can stress that: (1) the civil procedural law does not ban illegal evidences (or, at least, mandates to the substantive

law to state when a document cannot be used in trial)[23]; (2) the norm concerning the privacy protection explicitly permit the usage in trial of unlawfully processed personal data; (3) the art. 4 St. Lav. admits the utilization of the collected information when this is allowed by the GDPR.

Thus, the recall made by art. 4 St. Lav. to the privacy regulation appears pretty useless: even if this regulation is violated the information can still be used in the trial which, at least in Italy, is fundamental for the protection of the employee's rights. In fact, the typical scheme is that the information (illegally) collected are used to impose a disciplinary sanction (including dismissal) to the worker, whose solely possible reaction consist in suing the employer. However, in legal claim the information collected violating the GDPR can be freely used, thus diminishing the worker's rights.[24]

We can, then, conclude that the Italian system has the merit to improve the worker's rights by adding to the protection offered by the privacy legislation an additional safeguard consisting in the authorization procedure imposed by paragraph 1 of art. 4 St. Lav. On the other hand, however, the new version of the same article put in place an unsatisfactory coordination mechanism between the art. 4 itself and the data protection legislation, with the result to affect the employees' position in front of the Court.

The Swedish Reality: Where the Greater Risks for Employees' Privacy Come from Conducts Clearly Prohibited by the EU Privacy Legislation

Differently from Italy, Sweden lacks of any specific law addressed to regulate the privacy in the labor environment and the burden to find a balance between managerial interest to control workers' activity and their right to stay alone is mostly fulfilled by the national (and European) data protection laws.[25] However, additional constraint used to result from other provisions which, being generally binding, produce effects also towards the employer. The most important example was the *Kameraövervakningslag*,[26] which imposed the issuance of a license from

the County Administrative Board in order to install cameras directed towards an area of "public access".[27] However, with the entry into force of the GDPR this law was replaced by the *Kamerabevakningslag* (SFS n. 2018:1200, entered into force on August 1, 2018) which maintains the necessity of preventive authorization only for the camera surveillance carried out by public authorities or other subjects fulfilling a task of general interest. The reason underneath this decision is that for all the remaining subjects—employer included—the new data protection norms provide a sufficient level of regulation.

For those reasons, the issue of the employees' privacy does not present particular problems in the Swedish system and it is mostly tackled by the *Datainspektionen* (the Swedish Data Inspection Board or also DIB) by applying the well-known principles concerning the processing of personal data. On this regard, a greater attention is given to the principles of transparency and data minimization, as well as to the purpose limitation one. In fact, some investigations have highlighted that, concerning the IT technologies,[28] most of the employers have an internal regulation, but only a half of them actually control how those technologies are used by the employees. Moreover, the DIB plays a very active role in helping to outline the lawful behaviors, providing indications on how to use those equipment, such as personal computers, Gps monitoring systems or video cameras that, despite being widely spread, present major risks for the employees' privacy.[29]

In an overall perspective, Sweden does not seem to suffer from an excess of control: most of the employers allow a reasonable use of mail and internet for personal purposes, preferring to prevent abuses by obstructing surfing to some websites rather than to check the internet activity and the email of the workers (Datainspektionen 2005, p. 9 ss). Such checks are, so, put in place only to react against some specific events, such as virus infections or grounded suspect of illegal use. A similar approach characterizes the camera surveillance: they are mainly installed in areas open to the public and they are not addressed to control the working activity.

Anyway, some issues affect the fulfillment of the procedural requirements. In fact, even if the employer does not realize an extensive control of the employees, he should as well comply with a large number of

obligations. However, not always the workers are clearly informed about the existence and the exact extent of the controls and in some occasions, such as with the camera surveillance, they are simply provided with the same type of information addressed to the public (i.e. a sign informing of the presence of the camera) (Datainspektionen 2005, pp. 14 ss and 24 ss).

For all of those reasons we can stress that, even without a specific law addressed to the labor relationship, the privacy legislation provides a sufficient protection, thus to push the Government to do not implement the provisions that had been specifically suggested to safeguard the worker's rights (Statens offentliga utredningar 2009, p. 29).

Moving to the most critical aspect of the Swedish system we can point out that they are not linked to the legislation itself, nor to a pervasive monitoring of the worker's activity, but consist in the attempts of some employers to investigate aspects of the worker's life that should not be taken into account within the context of the labor relation. An example is the increasingly trend of the employers to request to the employees or the job seekers to produce criminal records certificates or extracts from the Swedish Social Security Agency disclosing the individual history of sick and parental leaves (Statens offentliga utredningar 2009, p. 31). Such conducts are clearly illegal following the personal data legislation both because the individual consent is not genuine, both because the purpose of the processing is not legitimate.[30] However, in the frame of the new European regulation the increasing of the fines against illegal processing should discourage such infractions.[31]

Finally, differently from Italy, the Swedish law does not impose any general duty of obtaining the trade union consent before installing instruments of remote control, even if some provision could be misleading. In fact, according to section 11 of the Co-Determination Act (1976/580) the employer must enter into negotiations with the trade union before putting in place significant changes in its activity or in the working conditions. Even if among those changes could sometimes be included the deployment of systems that can lead to a remote control of the workers (such as security cameras), the scope of the law is other than to protect the employees' privacy. For this reason in a large number of cases, it would be possible to install instruments that allow to

control the worker's activity without start any negotiation (not all of those instruments, in fact, cause the "significant change" required by the law). Moreover, even when such negotiation is necessary, it is not compulsory to reach an agreement, thus creating a relevant difference from the Italian system where the lack of understanding can be overcome via an administrative authorization.

For all of those reasons, we can conclude that in the Swedish system the lack of a specific legislation concerning the monitoring of workers does not affect their rights, being a wise and full application of the privacy act sufficient to provide the necessary protection. Moreover, the rise of the fines against unlawful processing realized by the GDPR should help to prevent those conducts that, in spite of already being illegal, were nevertheless diffused.

Spain: The Uneasy Balance Between the Workers' Privacy and the Employer's Right to Control

An interesting feature of the Spanish system is that the workers' right to privacy is stated by several norms, but most of those provide only general principles and lack of specific guides for the settlement of the great range of cases. Some examples are the art. 18 par. 4 of the Constitution (addressed to all the citizens and not only to the workers) stating that the law must limit the use of the information technology in order to guarantee the honor and the privacy of the citizens; the art. 4 par. 2 let. E of the *Estatuto de los Trabajadores* (ET) which imposes that the workers' privacy and dignity must be protected within the labor relationship and the art. 18 ET, which regulates the personal searches also imposing the respect of the worker's dignity. However, for the extent of this paper it is particularly interesting the art. 20 par. 3 ET, which regulates the right to control the workers. This provision gives to the employer a quite broad power to control the fulfillment of the labor duties, with the solely limit to balance his power with the respect of the worker's human dignity. Nevertheless, the norm, in spite of being purposely

directed to rule the labor relationship, does not provide any specific criterion concerning which type of control are legitimate and which are not.[32]

Even with the entry into force of the GDPR and the subsequent issue of a national act aimed to implement its supplementary provisions[33] the situation appears to be unchanged. The use of digital devices in the context of the working relationship is regulated by art. 87 of the new national law, which strikes a balance between the right to privacy of the workers and the right to control of the employer. However, the provision does not present any peculiar feature, limiting to state that the workers' privacy should be protected and that the employer has the right to access to the contents of the digital devices in order to exert his right to control. Only if the employer has authorized the personal use of the digital devices there is the need of a wider set of rules aimed to specify to which extent and in which time this personal use is allowed.[34]

Moving to the topic of the camera surveillance—which, as we will see, is since several years a sensitive one in the Spanish labor and privacy law—general rules are provided by art. 22, while art. 89 specifically regulates the camera control in the workplace. The main difference between the two norms consist in the additional safeguards that should be provided for the workers, especially concerning the preventive information. In fact, such information must be more consistent than the simple affixation of the well-known sign indicating that an area is under camera surveillance (which is deemed sufficient in the generality of the cases—in this sense see art. 22, para. 4). However, with a provision which appears to be clearly inspired at the decision of the European Court of Human Rights in the case López Ribalda (where a hidden camera recording the thefts of some cashiers of a supermarket has been considered against art. 8 of the Convention also because the lack of preventive information[35]), art. 89 specifies that if the employee is caught while committing an unlawful act it is sufficient the general information provided in accordance with art. 22 para 4.

In any case, it should be noted that this frame concerning the data processing of the workers could be subject to change, because the art. 91 of the national law, implementing the provision of art. 88 of the

GDPR, demands to the collective agreements the power to implement additional safeguards.

Finally, concerning the processing of personal data for the exercise of legal claims the national law recalls at art. 15, 16 and 18 the GDPR's provisions regulating the rights to erasure, restriction of processing and object, thus permitting that the data unlawfully processed could be used for this extent.

For all of those reasons a major role in order to identify the limits to the power of control of the employer is played by the case law that often, but not always, recalls the privacy legislation.

Also in Spain, as in Italy and Sweden, the lawfulness of the control is, then, investigated taking into account the abovementioned privacy principles. Thus, even if it is possible, to a certain extent, to use the cameras to control some of the worker's activities, the purpose limitation principle prohibits to use a camera recording for a different goal from the one initially planned.[36] Another important provision of the privacy legislation that, even if without an express recall, is taken into account in order to evaluate the lawfulness of a control is the proportionality judgment: the form of control must be suitable to reach the goal, it must be the less invasive available and the resulting benefit should be greater than the adverse effects.[37]

This legal framework, which from a formal point of view seems to be clear and lean, faces major problems when it must be applied to the controls realized using the IC technologies, generating an extensive case law across which it is not easy to navigate. In this regard particularly tricky are the decisions concerning the duty of preventive information (which, as already seen, is one of the main aspects of the Bărbulescu case). In accordance with the obligations coming both from the ECHR and from the EU an employer willing to process personal data in order to monitor the workers and eventually take disciplinary actions should, as a general rule, provide a preventive information regarding both the existence and characteristics of the monitoring system, both the possible use of the collected data. For those reasons, the *Tribunal Supremo,* with a decision of 13 May 2014, has declared void a dismissal based on recording from a security camera whose purpose had been declared by the employer to be other than the monitoring of workers. In fact,

the disciplinary scope was not included within the purposes of the processing.

However, this duty of information seem to be interpreted in a quite flexible way and the *Tribunal Constitucional*, even if declaring the need of this information, has stated that when the workers are conscious of the unlawfulness of a conduct, they should also be aware that the employer would put in place the necessary checks.[38] Therefore, such interpretation, even if not formally denying the duty of information, produces the final outcome of lowering the protection of the workers.

In the last years, anyway, it was another decision of the *Tribunal Constitucional* that focused the general attention. In fact, the Court in case n. 39 of March 3, 2016 (concerning the lawfulness of a dismissal motivated by some theft committed by the worker during the working activity) stated that a sign placed on the storefront window and indicating that the area was under camera surveillance was sufficient to comply with all the information duties. Even if the decision is clearly influenced by the particular circumstances (a thief caught by a camera that was not hidden, but only generically marked), it is important to highlight the relevant difference with the abovementioned case n. 29/2013. In fact, in that decision the same Court stated that the recording of the CCTV could not be used against the worker because it was missing a specific preventive information in this regard, while in the 2016 case the information was present (Fernández Avilés and Rodríguez-Rico Roldán 2016, pp. 66–67).

It is interesting to point out that the Judges motivate their opinion in case n. 39/2016 recalling the art. 3 of the video surveillance guidelines (Agencia Española de Protección de Datos 2006) which state that the label on the storefront is an appropriate information concerning the processing of personal data with a surveillance camera. However, in spite of this awareness for the privacy legislation, the Court seems to forget that those rules impose also the respect of the data minimization principle (Goñi Sein 2016, pp. 289–290). Thus, being possible to discover the illicit behavior thanks to the software controlling the cash registers, the more invasive control realized via the security cameras should have been considered unlawful (Aguilar del Castillo 2016, p. 35).[39]

Another interesting feature of the Spanish system is the link between a strict monitoring of the worker and the rules governing the evidences in the labor trials. In this regard the art. 90 par. 2 of the law n. 36 of 10 October 2011 (regulating the labor trial) states that are not admissible proofs obtained violating the fundamental rights. For this reason, an employer's decision (such as a dismissal) based on such proof should be nullified by the Court (Fernández Avilés and Rodríguez-Rico Roldán 2016, p. 49; Desdentado Bonete and Muñoz Ruíz 2014, p. 2 ss).

However, on one hand this provision has not impeded that in the national legal trial which later resulted in the López Ribalda case in front of the ECHR the recording of the hidden cameras were deemed a valid ground for the dismissal, while on the other the rule posed by the mentioned para. 2 of art. 90 is softened by the following para. 4. This norm states that when for the scope of a trial it is necessary to make an access to any kind of document (such as the emails, log file etc.) which could somehow affect a fundamental right the judge has the power to authorize such access, if there are not any alternative proofs available (Melgar Martinez 2016, para. IV, 2C).

Matching those two paragraphs of the same article it appears that the scope of the provision is not to keep some information secret, but to avoid that they can be discovered in a way that would be offensive for a human being. For this reason the employer can simply limit his control to the general features of the worker's behavior (such as amount of time spent on internet, number of emails sent, presence on the hard disk of folders labeled as "personal") so to do not "spy" his private life. Afterwards, if necessary to win the legal claim, he can ask the judge to check the effective content of those folders, emails and log files (which, under EU Reg. 2016/679, the employer is entitled to store if necessary for a legal claim).

For all the abovementioned considerations, we can stress that, concerning the balance between the power of control and the right to privacy, the Spanish system suffers a lack of legal certainty. The situation appears to be similar to the one that characterized the Italian legislation before the reform of the art. 4 St. Lav.: the need to apply to the contemporary digital reality a set of norms written when the production processes were totally different creates a broad range of

heterogeneous solutions which, moreover, are constantly changing.[40] In addition, as well as in the Italian framework, the rules of evidence in the civil trials do not seem to impede the resort to very invasive proofs, some of whom, such as the data obtained thanks to a covert video surveillance, present a problem of compatibility with the art. 8 the ECHR.

Conclusion

The analysis quickly sketched shows that, even moving from the same international regulation (ECHR and EU law), it is possible to realize very different sets of rules, with different effects on the enterprises' organizational schemes.

To build an efficient system it is, then, necessary to find a balance between the opposite interests at stake that could permit an efficient organization of the production as long as the workers' rights are guaranteed. For this reason, if a law as the old version of art. 4 of Italian Worker's Statute was too strict for the contemporary way of working, the actual interpretation provided by the Spanish Constitutional Court (case n. 39/2016) risks to be too loose. In addition, the standards settled by the recent ECHU decision "Bărbulescu v. Romania" (and the outcome of the López Ribalda one) impose to give a greater attention to the requirement of a full and effective preventive information.

From the confrontation between the actual text of the Italian art. 4 l. 300/1970 and the Swedish model we can, instead, argue that a fair balance could be obtained both with and without special labor law provisions concerning remote surveillance on worker's activities. However, in the former case because of the evidenced loop concerning the use of unlawfully processed data, it is necessary a better coordination of the two sets of rules. The latter, instead, shows that dangerous violations of worker's rights could also come from behavior that cannot be classified as ways of remote control and that, despite being already clearly forbidden by the privacy act, can be difficult to prevent or counteract, especially if realized towards job seekers.

Finally, both in Italy and Spain the weaker spot of the workers' protection is represented by the rules of evidence, which to a certain extent allows proofs obtained via unlawful processing of personal data.

All of those remarks suggest that in order to create a system able to strike an efficient balance between the workers' fundamental right to privacy and the employer's right to control and to efficiently organize the firm it is not possible to define a unique recipe. Instead, the optimal solution can be achieved only taking into account the peculiarities of the single Country, concerning both the social contest and the links with other areas of the law.

In any case, moving back to the comparison between the Italian and the Swedish legal frameworks, we think that it could be a good option also for the former to leave the employer free to install instruments that can be potentially used for a remote control of the workers even without any preventive collective agreement/administrative authorization.[41] In fact, a full and effective enforcement of the new EU Reg. 2016/679, should be sufficient to protect the employees against an excessive control, also considering that in the new legal framework has been introduced the principle of accountability and have been increased the fines against illegal processing.[42] Thus, with the proposed change the employer would still be obliged to demonstrate the fulfillment of the same conditions required nowadays, but such demonstration should be offered ex post (and under the threat to get a fine up to €20 million). For this reason, the level of protection of the workers would remain the same, but the organization of the firm would become leaner, thus increasing the global functionality of the system.

Notes

1. The risk for the workers' privacy depends both from the real time monitoring (as in case of video cameras connected to a remote monitor, but also for Gps locators or some kind of badges that allow to track the movements within a given perimeter), both from ex-post monitoring. In fact, an important characteristic of digital devices is to generate log files that store a large number of information concerning the operations

done by the user, allowing, even after a long period of time, to retrace its activity. For a specific focus on the issues of costumers' ratings see: (Ducato et al. 2019).

2. Some examples can be the political opinions, religious or philosophical beliefs, trade union membership, sex life or sexual orientation etc.
3. The case regarded a dismissal motivated by the use for personal purposes of a Yahoo Messenger account created under employer's request to chat with the clients. The core of the decision concerns the modalities of the control realized by the employer, which not only did not provide a complete information concerning the existence and modalities of the control, but also realized it in an invasive way, arriving to monitor the content of the personal conversation of the worker. More recently the Court has expressed the same principles in Case of Libert v. France (n. 588/13) of 22 February 2018.
4. Both those articles state that: "*Everyone has the right to the protection of personal data concerning them*".
5. Regulation n. 2016/679, of 27 April 2016, came into force on 25 May 2018 and it serves as the major rule concerning the data protection (hereafter GDPR). It is important to point out that even if the Regulation is directly binding it also gives to the member states the choice on how to implement some dispositions. For those reasons several member states have decided to keep into force their national data protection acts, emending them to the new set of rules.
6. The literature on this topic is very broad. For an overview see (Bellavista 1995, 2005; Calcaterra 1999; Carinci 1985; Dell'Olio 1986; Ghezzi and Liso 1986; Pera 1989; Santoro Passarelli 1986; Tullini 2011; Veneziani 1991; Zoli 2009). Concerning the obstacles created by the old version of art. 4 St. Lav. against the development of new organizational schemes of the firm see (De Luca Tamajo 1988, p. 9 ss).
7. See (Salimbeni 2015, p. 597 ss).
8. (Tribunale di Napoli 2010a, b; Fusco 2011). The legal uncertain is highlight by the fact that just few days before the same Court stated that the art. 4 of St. Lav. was not applicable to the badge (Tribunale di Napoli 2010b; Fusco 2011).
9. It should be underlined, also to better understand what we will say about the Swedish system, that the Italian law does not impose to the employer only a duty of consultation of the trade union, but requires that the parties reach a full agreement concerning the instrument.

However if they fail to do so it is possible to obtain a substitutive authorization from the Labour Inspector Authority.

10. The new text of art. 4 St. Lav. states: "1. the audiovisual equipment and the other instruments that can be potentially used for a remote control of the workers can be used only to satisfy organizational and productive needs, for occupational safety and to protect the property of the company. They can be installed only after a collective agreement with the shop stewards (so called RSU or RSA). (…). If the parties fail to reach an agreement the above mentioned equipment and instruments can be installed after an authorization of the local office of the Labour Inspector Authority. (…) 2. Paragraph number 1 does not apply to the instruments used to carry on the working tasks and to the ones needed to check-in and check-out. 3. If the employee has been informed on how to use the instruments and of the existence and features of the control the information collected following paragraph number 1 and 2 can be used for all the finalities linked to the employment relationship. Such use must, anyway, comply with d.lgs. n. 196/2003 (Privacy protection Act)".
11. The case law and the literature had, in fact, created two categories, the "defensive controls" and the "accidental controls", which had different conditions of legitimacy. However, the criteria used to identify each category were not clear, thus leading to several practical problems. For a recent reconstruction of this topic see (Salimbeni 2015, p. 593 ss).
12. Regulation that was, in fact, applied also with the old version of art. 4 St. Lav. even if not specifically recalled. However, as observed by (Del Punta 2016, pp. 91–92; Imperiali 2008, p. 862 ss), the analysis of the case law reveals a lesser attention of the judges to the torts based on a violation of the privacy legislation within an employment relationship.
13. The case study is very extensive, but the common threads are some limitations to the possibility for the employer to access to the recorded information and a maximum time limit for its storage. A good benchmark is provided by the decision of the Labour Inspector Authority to harmonize in all Italy the condition required to allow the implant of the most common devices (in the past each local office had its own praxis), conditions that are clearly stated on the Authority's web page: https://goo.gl/E21v6J.
14. Paragraph 3 of art. 4 lists not only the compliance with the data protection act, but also the duty of information concerning the use of the

instruments and the modalities and extent of control. However, this provision does not demand stricter requirements in comparison with the one coming from the international obligations signed by Italy. In fact, the European Court of HR in the Bărbulescu case clearly stated that art. 8 of the Convention imposes by itself this duty of information.

15. Partially different is the nature of the principles of lawfulness, fairness and transparency. They are a repetition of obligations coming from more general norms and do not seem to increase the degree of protection. In fact, they impose to process the data respecting the law and with modalities that, in the end, are already covered by duty of information imposed by art. 13 and 14 of the regulation.
16. It should be pointed out that with the d.lgs. 10 August 2018, n. 101 the Italian legislator amended the Italian Privacy Code (d.lgs. n. 196/2003) in order to make it compatible with the GDPR and to implement a set of rules that the EU norms leaves to the single member states.
17. The same wording of the actual art. 160 *bis* was contained in the amended art. 160 para. 6.
18. Similar provisions are also contained in art. 21 (right to object) and in art. 49 (concerning the possibility to transfer data outside the EU). In addition in the amended Italian Privacy Code the new art. 2 *undecies* clarifies that the rights listed at articles 15–22 of the GDPR (right to access, rectification, erasure, restriction of processing, portability, object etc.) cannot be activated if this would entail a foreseeable menace to the establishment, exercise or defense of legal claims.
19. Differently the criminal procedure code at art. 191 states that the evidence cannot be used if obtained violating the law.
20. Concerning the (modest) case law see (Tribunale di Bari 2007; Tribunale di Torino, ordinanza 2013; Pretore di Trapani 1993). It is useful to remind that for the European Court of Human Rights the art. 6 of the Convention does not forbid that in the national trail could be deemed admissible evidences unlawfully obtained (Van Mechelen and Others v. the Netherlands. European Court of Human Rights 1997, § 50).
21. The notion of "unlawful process" is very broad and it includes all the hypothesis in which there is a violation of the laws concerning the protection of personal data. The examples that seems to be the most interesting for the labour relationship are the violations of the data minimization principle (i.e.: the employer collects more information of the one needed, thus realizing a major invasion of the worker's privacy) and of the storage limitation one (i.e.: information stored for a longer period

of time, even if under this aspect a remedy could be found in art. 7 of St. Lav. which imposes the promptness of the disciplinary action).

22. A possible solution to this loophole could be provided by the code of conduct for the processing of personal data in the context of employment that it should be issued accordingly to the art. 2 *quarter* of the Italian Privacy Code, which implements the provision of art. 40 of the GDPR.
23. An example can be found in art. 9 d.l. n. 132/2014 (establishing a compulsory pretrial conciliation procedure called "*negoziazione assistita*") which states that the information obtained during the procedure cannot be used in the eventual subsequent trial concerning the same question.
24. This conclusion is boosted by the fact that the code of conduct for the processing of personal data during legal claims does not forbid to the lawyer to process personal data unlawfully obtained. In addition, concerning the data whose lawful use is not certain the art. 2 parag. 4 subordinates their processing to the existence of valid reasons (Garante per la Protezione dei Dati Personali 2018).
25. The *Personuppgiftslagen* (PUL), act 1998:204 (no longer in force) and, since the 25th of May 2018, the GDPR. Sweden has implemented the supplementary provisions of the EU regulation thanks to a wide range of norms, of whom it is here sufficient to recall the SFS 2018:218 and the SFS 2018:219. For a comprehensive analysis of the privacy at the job place see (Westregård 2002).
26. Act 2013:460 concerning the camera monitoring.
27. An area of "public access" was an area where potentially anyone can go regardless of his status. For this reason the notion covered an office open to the public, but not those zones where are admitted only the employees. It was so clear that the provision affected the labour relationship only as a side effect and only as long as the workers stayed in those public areas.
28. In most of the cases those technologies consist in the use of smartphones, internet and emails.
29. See for example (Datainspektionen 2014) where it is clearly pointed out that the purpose to achieve must justify such type of monitoring (being impossible to adopt a less invasive systems) and that the collected data cannot be used for purposes other than the one initially decided. It should be also pointed out that a greater attention is given to the topic of the consent of the worker as a legal basis to process

data. The DIB, in fact, points out that the state of dependence of the worker can lead to nonvoluntary consent (Datainspektionen 2014, p. 2), underlining a question that in the frame of the new EU Regulation has a major attention (see EU Reg. 2016/679 recital n. 43 and art. 7). A good example of how to balance the opposite interest can, finally, be found in the statements concerning the use of Gps for real time monitoring where the Authority states that such form of control is normally prohibited being too invasive (Datainspektionen 2009, p. 4) and can be used only if the worker is suspected of serious abuse, such as a fraud in the time report (Datainspektionen 2014, p. 4). Concerning the use of personal computers and, in general, of every instrument running a software we should mention the specific attention putted by the DIB on the topic of the log files. Keeping track of all the operations done by the user those files allow to retrace the whole working activity and for this reason the Authority clarifies that such files should be used only for technical reasons, such as monitoring the internet activities to prevent security issues and should not be employed to control the performance of the workers (Datainspektionen 2016, p. 35).

30. Moreover, the unlawfulness of the purpose is shown by the fact that such request aims to get around the ban for the employers to check by himself those information.
31. See art. 83, par. 5, let. a Reg. 2016/679 which in such cases imposes a fine up to €20 million or, in the case of an undertaking, up to 4% of the total worldwide annual turnover of the preceding financial year if it is higher.
32. On this point see (Fernández Avilés and Rodríguez-Rico Roldán 2016, p. 70): "*El art. 20.3 ET, impregnado de conceptos jurídicos indeterminados, contiene una regulación imprecisa donde las haya y, por tanto, nada añade para deslindar las facultades de control empresarial y los límites que se pueden imponer a los derechos fundamentales de los trabajadores*".
33. *Ley Orgánica 3/2018, de 5 de diciembre, de Protección de Datos Personales y garantía de los derechos digitales*.
34. In addition the XII final disposition inserts in the ET a new art. 20 *bis*, which protects the workers' privacy in relation to the digital devices by recalling the data protection law.
35. See below endnote n. 39.
36. Tribunal Constitucional n. 29 of 11 February 2013 which, on the basis of art. 5 par. 1 of the old national data protection act, recalls the so called "*derecho a la autotutela informativa*". For a similar conclusion

regarding the data collected with a GPS see Tribunal Superior de Justicia de Madrid 20 September 2014.

37. See Tribunal Constitucional n. 86 of 10 April 2000, which justifies the resort to a camera monitoring system because of the suspicion of an illegal conduct of the worker.
38. Tribunal Constitucional n. 170 of 7 October 2013.
39. In addition and concerning the duty to inform of the existence of the cameras it should be mentioned the López Ribalda case of the ECHR (case n. 1874/2013). The decision of 9 January 2018 of the third section of the Court takes into account a situation in which there were, in addition to visible and properly labeled cameras, also some hidden ones. Moving from the assessment that the data protection law does not allows private entities to process personal data without a preventive information and that the covert video surveillance took place towards all the cashiers and for a long period of time, the Court concluded that there had been a violation of art. 8 of the Convention. The case has been referred to the Grand Chamber (hearing held on the 28 November 2018). Its final outcome has been reached with the judgment of 19 October 2019, whereby the Court reversed the previous standing and held that the installation of hidden cameras did not constitute a breach of art. 8, on the grounds of the existence, in the case at stake, of reasonable suspicion that serious misconduct has been committed and the extent of the losses identified. The timing of the publication of the Grand Chamber's judgment does not allow for a deeper analysis of its contents and impact in the present chapter.
40. For a survey on the Spanish case law see (Lluch Correl 2014).
41. It should be underlined that repeal the condition of the preventive authorization does not mean to legalize the remote control of the workers. In fact, such authorization is only a condition to install instruments whose main purpose, also because of the GDPR, can never be to perform such control.
42. The purposes that could be legitimately pursue with the recalled instruments would remain the same and the principles listed under art. 5 of the new Regulation would ensure that the employer cannot twist his power in order to realize an illegal control of the workers. Moreover, the additional constraints that are nowadays required by the trade union to sign the agreement (such as, for example, the so called "two-man rule" in order to access to the data) and that represent the added value of the Italian system, could be replaced by the code of conduct

and the certification mechanism regulated by art. 40 and 42 of EU Reg. 2016/679 as implemented by art. 2 *quarter* of the new version of the Italian Data Protection Act (d. lgs. n. 196/2003 as modified by d. lgs. n. 101/2018).

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7

The Lie as a Privacy Protection Measure

Izabela Florczak and Marcin Wujczyk

Introduction

The subject of the analysis presented in this chapter is the protection of workers' privacy in the light of technological transformations that are occurring at the workplace. The protection has been discussed from the point of view of the worker's right to lie as a means to ensure such privacy. The starting point for our discussion is the definition of privacy itself, which will then be referred to the notion of workers' privacy. Creating a conceptual basis allows us to move on to the essence of the discussed problems. Technological changes that occur at the workplace have a significant influence on the limitation of workers'

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_7

right to privacy, which in turn leads to the need for stronger protection. In order to ensure it, workers use various measures. One of them is lying. To identify the situations when workers may provide false information to protect their privacy, it is important to define the standards that result from using the right to lie, its countertypes and the nature of this measure.

Workers' Right to Privacy

The existing labour law regulations feature two clearly noticeable trends with respect to supervision over work performed by workers. The first refers to the introduction of more and more precise means to control the worker, allowing to monitor not only the duration of work, but also its efficiency, place of performance or compliance with binding law, in real time. For control purposes, modern information collecting techniques, including video monitoring, biometric, readers, geolocalisation devices and detectors of psychotropic substances are increasingly used for control purposes. Traditional forms of worker control, such as personal search or blood alcohol tests, are also enjoying a renaissance. This tendency is manifested in increased subordination of workers and employers striving to possess detailed information about their staff.

The second trend is quite the opposite. It consists in offering workers more freedom in determining the way of performing the entrusted tasks. This is accompanied by reduced employer control, as the employer expects specific effects, without being overly interested in the means used to achieve them. In both cases, the protection of the worker's right to privacy plays an important role in shaping the relationship between the employer and the worker.

The issue of respecting privacy matches the so-called humanisation of work, which is gaining an increasing support among theoreticians and practitioners of labour law. They are starting to notice that workers cannot be treated as objects, only with reference to the goals set by the employer. It is necessary to treat them as subjects of the labour law relationships and, as a result, to consider their needs. Humanisation of

contemporary labour law relations manifests itself in acknowledging that the rights and interests of a worker are one of the main objectives of labour law. The worker, as the weaker party, by definition requires stronger protection. It has been known for a long time that performing work involves the whole subjectivity of the worker and considerably extends beyond the scope of performing duties entrusted by the employing entity. This may result in the employer's interference in areas that are often beyond the framework regulated by the employment relationship. As a result, the employer may obtain private information about their workers in a legally unjustified way. Thus, it is necessary to search for new legal measures that would protect the worker against such unlawful intervention.

Privacy plays a major role in the life of each human being. One should note that "privacy and liberty are strongly connected. A person may use the freedom that they are entitled to only if their private lives are adequately protected" (Puwalski 2003, p. 24[1]). One of the main functions of privacy is to guarantee the individual a sense of safety. Privacy is also necessary for mental health. It fosters the development of human personality and creativity. It allows individuals to form personal views and opinions (Bloustein 1964, p. 1003[2]). Thus, privacy supports democracy and reduces the tension between social norms and individual needs (Fried 1968, p. 477[3]). As Erich Fromm has noted: "Privacy still seems an important prerequisite for effective human development. It is mainly due to the fact that it allows humans to hide from the noises of the world and the people and to continue their own thought process in peace" (Fromm 1996, p. 71[4]).

Privacy fosters the strengthening of such social relations as respect, love, trust and camaraderie. "Privacy is not merely a means to strengthen these fundamental relationships. They are difficult to imagine without privacy. It improves the individual ability to establish and maintain human interactions of various intensity" (Fried 1968, p. 477[5]).

Alan Westin lists four main functions of privacy:

1. it allows to ensure the free functioning of personal autonomy. This is necessary for the development of human individuality and it enables humans to take specific life decisions consciously;

2. it allows for taking an emotional rest from the performed social roles. This function is a response to the stress and everyday tension that exist in our lives. Privacy allows us to take a rest from these emotions and guarantees maintaining good health;
3. it provides the time for self-assessment of one's behaviour and of the obtained experiences and to take decisions. Each human choice is preceded by choosing a specific strategy. Privacy allows us to develop it based on the analysis of experiences obtained so far;
4. it limits, and thus protects, communication between individuals. This function of privacy is particularly important in urbanised communities, where encounters between individuals occur very frequently. Privacy enables humans to satisfy the need of all individuals to share their secrets with a group of the closest relations, such as family, friends or colleagues (Westin 1967, pp. 32–39[6]).

It should be assumed that the necessity to ensure a minimum level of privacy also exists in employment relationships. Literature emphasises the positive influence of privacy on work satisfaction and efficiency. Conducted research has demonstrated that having a door at the office is an important factor affecting the satisfaction from the performed work (Zaleski 2001, p. 129[7]).

Guaranteeing a certain degree of privacy to workers while performing work is an important element of the humanisation of employment relationships. This results in the empowerment of workers, which in turn improves the workers' attitude towards the management of their workplace and reduces the distance between specific tiers of the organisational hierarchy in the enterprise. As a result, the partner relationships between workers and management improve.

It seems that the possibility to use a certain extent of privacy also improves the mental state of the workers, which leads to improved safety and hygiene of the performed work.

Finally, one cannot omit the fact that the ability to have some privacy at work contributes to the workers' sense of being respected by their employer. This is not only a form of exercising workers' rights, but also a form of appreciation of the work performed by the employed person.

Similarly to other rights and freedoms, the right to privacy is axiologically derived from human dignity. One of the aspects of dignity is the right to be the subject of one's actions and of the resulting rights and obligations. Dignity includes the right to develop one's own personality as well as the ability to autonomy and self-determination. Thus, dignity establishes a series of rights from the point of view of individual autonomy. Personal dignity is not only the foundation of privacy, but also, as a rule, determines its limits. Hence, the notion of dignity is useful in analysing whether a given behaviour violates the right to privacy. This concept also refers to the privacy that workers are entitled to under employment relationships.

The worker's privacy in an employment relationship is understood in many different ways. One may notice a narrow definition of privacy, which is limited only to elements closely related to the intimate aspects of the given person's life, as well as a broad definition, which includes very different areas (such as the freedom of speech or of religious affiliation) into the scope of privacy (Otto 2016, pp. 10–25[8]). In our opinion, the notion of privacy should be understood in narrow terms, as referring to those areas of life that are generally inaccessible for the public. Moreover, it should be noted that, although privacy protection is becoming increasingly important, the scope of information subject to such protection is being systematically narrowed. The reasons for such situation include the expansive forms of employers' control of the performance of work by workers (which will be further discussed in the subsequent sections of the present chapter).

The question arises, how to determine what is and what is not subject to privacy rights.

The etymology of the word "privacy" derives it from the Latin word "privus", which is translated as "own", "free from" or "single". Privacy involves several areas of human life and affects numerous aspects of functioning in the society. This makes it impossible to list all elements that constitute the content of privacy; one may only try to enumerate the most important ones.

The doctrine distinguishes between four meanings of the term "privacy":

1. **Physical privacy**, which refers first of all to categories related to property rights. This interpretation is best expressed by the English saying "a man's house is his castle". However, this meaning of privacy should not be identified with the right to ownership, as these are two independent rights. Still, privacy may be important, for example in situations when the state is authorised to confiscate items or search real property that belongs to an individual.
2. **Privacy of decisions**, which refers to complete freedom to make decisions concerning actions taken by an individual in their sphere of privacy.
3. **Privacy of information**—this meaning of the term refers to the ability to decide about the extent of disclosing information concerning ourselves. It includes the freedom of expression.
4. **Privacy of formation**, where privacy is treated as spiritual depth. In this meaning, privacy refers to such activities as watching television, commercials or mass culture that penetrate human thoughts to an excessive extent. Thus, privacy is understood as freedom from interference with the individual's thoughts (Scoglio 1998, pp. 1–2[9]).

The main element of the content of privacy is autonomy. Privacy is defined as the type of interaction or the degree of distance and isolation (Turowski 1992, p. 12[10]). This aspect of privacy is best expressed in the American phrase "right to be let alone". Thus, the individual has the right to determine the extent to which others will have access to information about his or her life and related matters. On the other hand, the Supreme Court of the United States of America understands privacy as the right to take decisions with respect to intimate practices (Case: Griswold v. Connecticut (381 U.S. 479 (1965))) (Rodríguez-Ruiz 1997, p. 27[11]).

In his analysis of the notion of privacy, A. Westin lists four states of privacy: solitude, intimacy, anonymity and reserve. These elements are defined as states of privacy (Westin 1967, p. 31[12]).

Isolation is a state when the individual is separated from the group and freed from the observation of other persons. This state is characterised by nearly absolute separation from the external world. The only stimuli may be the heat, noises coming from the outside, or vibrations,

or the sense of being observed by God or some supernatural force. According to A. Westin, this is the most complete state of privacy that individuals can achieve (Westin 1967, p. 31[13]).

In the second state of privacy, intimacy, the individual is a part of a small group of the closest persons, such as the spouse, a friend, or members of a work clique. In such group, the individual feels and behaves freely. Lack of intimacy would result in eliminating the relationships that are established between members of such unit.

The third state of privacy distinguished by A. Westin is anonymity. Privacy in the form of anonymity occurs when the individual is in public places (riding the subway, walking the streets or sitting in a café) and knows that he is being observed, but does not expect to be personally identified. This gives a sense of security and enables the individual to move in the crowd without fear. The state of anonymity may be challenged for well-known celebrities, as they are aware that they may be recognised (Westin 1967, pp. 31–32[14]).

The most subtle state of privacy is reserve, defined by A. Westin as the creation of a psychological barrier against unwanted intrusion. Hence, reserve is the distance created by the individual between himself and other subjects. Its aim is to prevent the disclosure of information that we would like to keep secret and thus to protect our personality.

In conclusion, it should be stated that the nature privacy is not uniform. It consists of a series of emotional states of the individual, which may manifest themselves in human interactions, but not necessarily. It is quite obvious that the aspects of privacy used to protect the information about the individual and their behaviour will be determined by such factors as the relationship between us and the other person or the type of information covered by privacy.

It is doubtless that the existence of privacy may also be discussed in reference to employment relationships. Such states as secrecy or intimacy are not unknown to people performing subordinate work under the supervision of the employer. Similarly as outside of work, such individual feels the need to separate themselves from the group. Moreover, it should be noted that in employment relationships such need may sometimes be very intense, which is due to the higher degree of interference with the private life of an individual, which is permitted by the

nature of labour law relationships. However, it should be pointed out that the scope of respecting privacy in employment relationships may slightly differ from that applicable to other social roles performed by the individual. It is worth returning, once again, to the concept developed by A. Westin and the aspects of privacy presented in his works. In our opinion, in the relations with the employer, the worker will feel the need to be isolated, maintain intimacy, anonymity or reserve, and, at the same time, he will have the possibility to do so. However, one should realise that the nature of the employment relationship will quite often contribute to the limitation of these elements. The worker will be able to be isolated only in exceptional cases, e.g. during the break or in the dressing room.

The provisions that regulate employment relationships will often limit this aspect of privacy and thus prevent the worker from fully benefitting from it. So, even this brief analysis demonstrates that the scope of privacy in employment relationships is objectively narrower than in most other social relationships.

The Authors would like to present three theories that attempt to explain the issue of the right to privacy. The first one defines privacy by distinguishing between three areas: intimacy, privacy and general accessibility (Kopff 1972, p. 10[15]). The limits of these areas are determined by the degree of accessibility of information qualified to the given area to others. Thus, certain data are subject to intuitive protection, depending on their nature, based on rules that are commonly accepted in the given community. According to this concept, it is reasonable to use the idea of rights to intimacy and privacy of personal life, due to several reasons. Firstly, it allows to determine the subject of protection of private life more precisely and thus facilitates defining the circumstances that exclude such protection (exemption circumstances). Secondly, the introduction of the notions in question allows for applying them to include still new, individual personal rights. Introducing the right to intimacy and privacy of personal life will enable judicial authorities to protect personal rights more effectively (Kopff 1972, p. 14[16]).

According to the concept of privacy spheres, the sphere of intimacy of personal life is understood as all information related to the individual and their experiences that the given person does not reveal even to

the closest people. On the other hand, disclosure of facts included in this sphere evokes a sense of shame, embarrassment and distress. This sphere includes among others, the freedom of sexual experiences, available only to the partner and the freedom of belief. According to supporters of this concept, no circumstances exist that would justify infringing on the sphere of intimacy, i.e. it is inacceptable both to distribute information covered by this sphere and to become familiar with them on one's own initiative. This sphere is defined as "absolutely protected" (Kopff 1972, p. 33[17]).

The second of the discussed spheres is the sphere of privacy of personal life. In German doctrine it is argued that this sphere usually includes family and neighbour life, life in a circle of friends and the attitude towards work colleagues. It is emphasised that the privacy sphere includes both those areas of life that are usually hidden behind the closed doors of one's own home and those that involve interactions with the society. A. Kopff quotes B. Hubmann stating that "the sphere of privacy also includes this part of the private life of an individual that is accessible to other people by itself, on an everyday basis" (Kopff 1972, p. 35[18]). The possibility to intervene and limit the sphere of privacy to the benefit of public access sphere is considered acceptable. The criterion that distinguishes between these two spheres is the criterion of "justified interest". Interest is justified if it refers to the society or certain groups thereof and if, at the same time, the limitation of the privacy sphere is justified by such prerequisites as the interest of information, science, culture, etc. The limit between the spheres of public accessibility and privacy may also be defined by "particular risk that an individual accepts when participating in social life" (Kopff 1972, p. 38[19]).

Several differences between the privacy and intimacy spheres may be listed. As far as the intimacy sphere is concerned, there are no circumstances that would justify the infringement on such sphere, while for the privacy sphere such circumstances may be found. As opposed to the intimacy sphere, the sphere of privacy may be limited, e.g. due to public order, health protection or morality. The privacy sphere is mainly protected against dissemination, while for the intimacy sphere obtaining information about it against the will of the person whom such information concerns will also be unlawful. Measures that are useful in the

protection of the privacy sphere belong mainly to the civil law domain and they include, for example, non-pecuniary compensation. On the other hand, the main measures used to protect the intimacy sphere should be preventive, and thus, in such events, pecuniary compensation should be preferred.

The third distinguished sphere is the sphere of general accessibility. The author separated it into two areas: the first one enables obtaining knowledge about the facts included in the privacy zone, but without the right to disseminate them and the other allows both to know the facts and distributing information from the privacy sphere. As it has been already mentioned, this sphere may overlap with the privacy sphere, but, according to A. Kopff, it must not infringe upon the sphere of intimacy (Kopff 1972, p. 38[20]).

The second theory assumes that privacy is the right to determine the extent of access to information about oneself. Such access is granted or refused by means of creating and eliminating so-called information barriers by the workers themselves, who, while creating or eliminating a barrier decide whether the given information is private or not. According to this concept, the essence (or, in fact, the scope) of the right to privacy should be derived from the right of each individual to self-determination (Selbstbestimmung) (Wild 2001, p. 69[21]). The autonomy of an individual is a source of wider legal protection that that resulting from the right to be let alone. It also includes certain rights (other than the right to isolation) in relationships with other people. Thus "the given circumstance is not protected against dissemination due to its special relation with the entitled subject, but first of all at such time, to such extent and due to the fact that the entitled subject wishes so" (Wild 2001, p. 69[22]). Hence, to evaluate whether the right to privacy has been violated, it is necessary to determine whether the individual wished to apply this right to the given circumstance. Such evaluation consists in determining, whether the individual had set a limit, whose infringement consists a violation of privacy. In order to determine such limit, M. Wild formulates a construct referred to as the information barrier. Such barrier should exist to such extent that enables the addressee of the "obligation to maintain a secret" to recognise the will of the individual not to disclose information covered by the

scope of privacy. Such knowledge may result from two elements: either (1) the behaviour of the individual who wishes to protect their privacy; or (2) the principles of community life. Such formulation of the barriers allows to distinguish between information that the given individual wishes to keep private and such that is not treated as private.

Finally, one might encounter the so-called circles theory (Wujczyk 2012, 2.5[23]). It is based on the assumption that the binding norms in the given legal system determine a certain category of information that is protected by the right to privacy by virtue of law. At the same time, other categories are deprived of such status. In this way, two circles—the inner and outer circle—are established. They are separated by an area, in which the individual may determine on their own, by creating the relevant barriers, what they wish to remain private and which information they agree to be disclosed. This concept is based on 3 main assumptions:

- everybody has the right to decide about the extent of disclosing information that concerns them (to the society or to a specific group);
- every individual is entitled to a certain minimum level of privacy, which is protected regardless of whether they take steps to ensure such protection;
- there are certain social and legal norms that set a limit, beyond which the individual cannot demand privacy protection.

The first assumption refers to the theory of information barriers. This concept seems to reflect the right of each individual to determine what they consider private in a very accurate way. Thus, an individual who wishes certain information that concerns them to remain secret or to be disclosed only to a specific circle of recipients should establish an information barrier that will be visible to others. Such barrier will set the limit of accessibility to the data about the individual and their behaviour. However, such barrier may be established only by means of conscious or unconscious actions of the individual. On the other hand, such barrier cannot be derived from a habit or existing social norms (although these factors will be important in the determination of the

individual's freedom to decide about their privacy, which will be discussed in detail in further sections of the chapter).

Thus, the ability to set barriers means that the individual has the right to dispose of their informational autonomy. One should note that individuals always live in a specific social group and legal culture that affect the scope of their freedom to exercise the rights granted to them. I believe that the scope of the right of privacy is determined not only by the actions of the individual. In my opinion, each social group has norms that set, first of all, a certain minimum right to privacy that each individual is entitled to, regardless of whether the individual takes actions in order to establish an information barrier protecting such minimum or neglects to do so. The minimum scope of protection is determined by social and legal standards (including the existing traditions). Thus, it is necessary to refer both to the binding legal system and to the principles of social cohabitation, practices or generally accepted rules of behaviour that are adopted by the given community. Obviously, this does not mean that each individual is entitled to the same minimum protection (although they are usually quite similar). It is the legal and social norms that define the extent, to which the given category of people is guaranteed the right to protect privacy and the degree in which it depends on taking additional steps that consist in establishing barriers. The above assumption allows us to eliminate the quite popular accusation that the barriers do not provide protection for subjects who are unable to establish such informational barriers (e.g. children or the disabled), as these subjects will still be protected by the minimum right to privacy guaranteed under the given legal system. Secondly, it should be noted that, although the individual has an extremely wide scope of freedom to decide what is private and what is not, they cannot completely restrict access to information about themselves. The prohibition to do so results mainly from the established legal standards (e.g. those that oblige individuals to provide their personal data to public authorities) and, although extremely rarely, from social standards (mainly in situations when the given information refers also to other individuals). Hence, the individual cannot demand privacy protection within the scope set by such standards. This refers, in particular, to information about public figures.

Thus, pursuant to the theory of circles, the right to privacy may be treated as an area consisting of three circles. Information in the inner circle is protected under binding regulations and customs (principles of social cohabitation), without the need to take any actions by the individual. Information that is qualified as belonging to the outer circle is not granted protection under the right to privacy. However, this does not mean that the outer circle does not contain information that may be considered private (for example, one may assume that information about an individual obtained by a police officer during personal search is of private nature, yet it is not protected by the right to privacy). Finally, these two circles are separated by an area in which the individual may decide freely whether they wish to protect the given information from disclosure to others or not. This decision is made by means of establishing, or, optionally, removing an information barrier.

Finally, one should answer the question, whether privacy is of a universal nature, i.e. whether its limits remain the same regardless of the location where the worker performs work. It seems that they do not. The scope of privacy protection depends on social and cultural conditions. Thus, it may also differ depending on the place of performing work. Privacy is not an absolute institution, but a right embedded in a specific culture and hierarchy of values. The differences in these factors may manifest themselves not only on the macro scale, but also in microscale. Hence, one cannot exclude that the issues of information privacy may be perceived differently by groups of workers who are employed at different places of work.

Workers' Right to Lie in the Light of Technological Development

In the second part of our study, we will discuss the workers' right to lie as a mean of privacy protection. It is worth starting the discussion with the question whether nowadays, in the light of social transformations and accelerated development of new technologies, the workers have more opportunities to lie, because the employers are increasingly

interfering with their privacy? If the answer to this question is positive, we should reflect on the phenomena that may influence the above tendency.

The technologies used in employment relationships that interfere with the privacy of workers are Global Position System (GPS) and Radio Frequency Identification (RFID) technologies that enable geolocalisation (Otto 2016, p. 1[24]). Geolocalisation devices offer employers the possibility to control their workers by tracking their location both during work time and after hours (Wujczyk 2012, 6.19[25]), which significantly contributes to the limitation of privacy and even the freedom of workers (Kuba 2014, 5.6.1[26]). Employers who use GPS install the receivers in vehicles, laptops or mobile phones, which are then handed over to workers who move together with the entrusted property. If the worker is in the same location as the device equipped with a receiver, then the employer is able to locate them. Data collected with the use of GPS are subject to protection as personal information (Turnbull 2009, p. 421[27]). In our opinion, such data belong to the worker's area of privacy. Obtaining such data by the employer should be evaluated differently depending on whether the employer permitted workers to use or possess company equipment after working hours or not. In the first situation it should be assumed that the worker who possesses the given item outside the workplace or working hours acts within the established organisational structure and that collecting information about the location of the worker by the employer constitutes a violation of privacy. Thus, the worker should have the possibility to switch off the GPS location transmitter. It is worth mentioning the opinion of the Working Party 29, according to which, if it is possible to use the employer's equipment outside the workplace and working hours, then the employer may not process the workers' geolocation data outside of their working hours. Each item used by the worker should have a possibility to disable location functionality (Working Party 29 Opinion[28]).

In the second discussed situation, collecting data about the location of company equipment, and thus of the worker who possesses it, should be considered as permissible. A worker who uses a company car or phone against the existing regulations has to be prepared for consequences in form of a violation of their privacy. The employer has the

right to determine the location of their possessions, if they are used in violation to the established principles of use. In such situation, the only issue that remains disputable with respect to proper identification of the subject of protection is whether the worker has to express consent for geolocation. When determining the location of their possessions, the employer also geolocalises the worker outside the workplace and working hours. However, collecting data about someone's location requires the consent of such person. If a conflict of interests occurs (between the property right of the employer and the worker's right to privacy), it should be decided which of them should be protected more strongly. If the protection of property right is considered more important, the worker's consent for geolocation will not be required, as the subject of location control is not the worker himself, but only the equipment that he uses, which remains the property of the employer. However, if we notice a strong connection between the location of the equipment and that of the worker, then it will become justified to require the worker's consent for geolocation, because information about the location of a natural person may be personal data of that person and due to that, it cannot be collected without consent (Barański and Giermak 2017, p. 207[29]).

On the other hand, RFID technology may be used, for example, to verify the access of workers to certain data (Szymorek 2012, p. 523[30]). A worker who, in order to protect his or her privacy, does not want to reveal the real purpose of their stay at a certain location, will often lie when explaining to their employer the reasons why they were there. An example may be the situation when a worker visits a special healthcare facility or hospital frequently. In order to avoid revealing information about their health condition, the worker may resort to lies, by claiming that they only visit a close relative at the facility. If geolocalisation technology is used as a means interfering with the privacy of workers, lying seems a relatively easy way to protect it, and the application thereof is nearly unlimited, due to limited possibilities to verify the truth.

Another form of infringing upon the privacy of workers may be the use of various forms of monitoring, such as CCTV monitoring, by employers. Workers monitoring may encompass different forms of workers control (Barański and Giermak 2017, p. 199[31]). Cameras

may record either images only or both images and sound. Due to the amount of information that may be obtained through CCTV monitoring, this type of control should be treated as one of the control measures that affect the worker's privacy in the strongest way. There are no generally developed standards that enable to monitor workers with the use of cameras. Whilst some of the arbitration decisions clearly recognise such monitoring as generally unwarranted, others give a green light to the monitoring of electronic communications when an employer has reasonable cause to believe that a worker violated the company's policy or admit evidence obtained through surreptitious surveillance (Otto 2016, p. 59[32]).

One may list several conditions that need to be met for monitoring to become acceptable. These conditions include:

1. **Compliance with the law**—monitoring must not consist in using methods that violate the law, such as illegal covert surveillance. One should also note that monitoring will involve collecting personal data to a great extent. Thus, the employer has to ensure compliance with personal data protection laws during monitoring.
2. **Justified purpose**—monitoring cannot be used without a clear reason. It does not mean that the reason must be particularly important or significant, although it must justify taking specific control measures.
3. **Proportionality**—various means may be applied to control workers. If the application of a method that interferes with privacy to a lesser extent allows to obtain similar results, such method should be used first of all. In such situation, the use of monitoring that is disproportionate to the assumed purpose will result in a violation of the law.
4. **Transparency**—workers should know which form of surveillance they are or may be subjected to and to what extent they may potentially use company equipment for their private needs. In order to achieve it, it is necessary to establish clear rules of monitoring and to define the degree of privacy in which workers may perform actions that are not directly connected to work. Such rules may be included in the working regulations, but they may also take the form of the employer's ordinance. Principles of the use of monitoring will also

often result from the practices used at the workplace. However, this form of establishing the limit between monitoring and privacy should be considered the least precise.

5. **Meeting the requirements stipulated in personal data protection laws**. During monitoring, personal data of works are collected (such as lists of telephone conversations) and the process of collecting and processing such data is subject to the provisions of the Act on Personal Data Protection. The employer is obliged to comply with the provisions of this Act.

The possibility to challenge the recording by the worker by means of lying about the presented circumstances seems hindered, yet not completely impossible. When presenting their version of the events referring to the recorded images, the worker may interpret it in a misleading way, in order to protect privacy.

Another application of technology as a means that contributes to limiting workers' privacy are also polygraph tests. In employment relationship, such tests are used in the process of the recruitment and selection of applicants, as well as during employment—in order to verify the loyalty of workers in connection with exiting violations, to control the health condition of workers, to detect potential addictions and to determine whether the worker is connected to the world of crime. Polygraph testing, as a manifestation of technology use, may violate the privacy of workers (Drozd 2003, p. 10[33]) by interfering, e.g. with the areas related to their health or their subjective opinion about the employer. Such tests generate a conflict between the interest of the employer in obtaining information about the worker and, among others, the personal rights of the worker in form of privacy (Wujczyk 2012, 6.14[34]). Polygraph testing allegedly forces the worker to tell the truth. Thus, in this specific instance of technology application the worker is not only pushed to lie, but completely deprived of the right to tell lies.

Another privacy-related aspect of polygraph testing is the content of questions asked. Such questions may refer not only to the performing of work, which should be considered as an interference with the worker's privacy. When preparing questions, one should formulate them in such

a way that ensures that they will refer to matters other than professional ones to the least possible extent. In no event should they concern intimate matters. However, if such question has been asked, it should be assumed that the worker may refuse to answer it, and if the employer asked for the reason of such refusal, the worker would have the right to provide a false explanation.

Technological transformations that result in the modification of social relationships in the work environment provide employers with an opportunity to violate the privacy of workers on still new levels. In order to protect their privacy, the workers decide to lie. The possibility to do so may be unlimited or limited, depending on the technology used to interfere with their privacy. Some of these technologies (including the polygraph discussed above) may result in a complete exclusion of the workers' right to lie, by forcing them to tell the truth.

How can workers protect themselves in a situation when the employer infringes upon their privacy? One of the potential protective measures is to refer to the so-called "right to lie" (Drozd 2004, p. 164[35]) mentioned above. This concept has been created in German law (Degener 1975, p. 57[36]). It is based on the possibility to use right to self-defence of the right to privacy to which the worker is entitled when confronted with a violation of such right. For example, in a situation, when the employer asks an illegal question, demanding the worker to provide data to which the employer does not have the right, or when asking a female worker whether she is pregnant.

The institution of right to self-defence is based on the assumption that in the event of an unlawful attempt to violate a specific right, the attacked may use measures to defend themselves against such violation. In such event, the defending party may resort to measures that would be considered as inappropriate (such as violence) if there was no attempted violation of such right.

Two elements should be distinguished in the structure of self-defence: the attempted violation and the defence. Not every assault will justify the application of necessary self-defence. In order to justify it, the assault has to:

1. constitute at least a threat or a violation of someone else's right or property of any kind;
2. be direct—the assault should precede defence, i.e. self-defence cannot be taken before the assault or only after it ends. It is assumed that the threat is direct if "it is in progress at the moment of protecting oneself against the danger". According to a slightly different view, the directness should not refer to the moment of defence, but it should be considered separately from the defensive actions. Pursuant to this assumption, an assault is a state of imminent danger threatening a legal interest, i.e. a situation when the given subject starts attacking a specific right and, at the same time, when there is an objectively high likelihood of such imminent attack on such a right;
3. has to be unlawful, i.e. violate the existing standards that result from labour law provision, and, in certain cases, also from the principles of social cohabitation. In the light of civil and criminal law it is argued that an unlawful assault may only be caused by humans, which is due to the fact that such human behaviour may be assessed in terms of unlawfulness. Unlawful actions do not have to be wilful. What is important is that they should violate the binding regulations.

Actions that are taken only "apparently", i.e. so-called "apparent assaults" cannot be characterised as a direct and unlawful assault. An example may be a simulated attack, made for fun or while playing.

The concept of the right to lie is based on the assumption that the institution of self-defence may also be applied if the worker's right to privacy is violated or even threatened by the employer. Unjustified infringement upon the privacy area is treated as an assault, against which the workers may defend themselves also by giving false answers concerning the information to which the employer is not entitled (e.g. information about the pregnancy of a female worker). Thus, lies are considered as a means of protection against unlawful actions of the employer.

In the light of the above analysis, the worker may exercise their right to lie, firstly, if the actions of the employer are aimed at violating privacy. The determination whether the employer intends to infringe upon privacy will depend to a great extent on whether the given

circumstances related to the worker may be classified as belonging to the privacy sphere or not. This is why it is so important to adopt the appropriate concept of privacy. In the first section of this study, we presented several proposed concepts of the right to privacy. However, the selection of the concept that should be applied depends strongly on the cultural conditions and legal tradition.

Secondly, the assault on the worker's right to privacy has to be direct. As it has been mentioned, the directness may be interpreted in two ways: (1) as the existence of a direct threat in the spatial and temporal sense, or (2) as the existence of a direct threat in reference to the relationship between the threatening party and the threatened rights. In our opinion, the second interpretation is more appropriate, as it allows for a real protection of privacy and does not eliminate the possibility to refer to the right to lie in situations, when the duration of the attempt to violate privacy is longer. In consequence of such interpretation, the workers may exercise the right to lie in cases when they are asked to provide an answer to a question that unlawfully interferes with their privacy within several following days (not at once).

The above may mean that the worker will not be able to exercise their right to lie in cases, when there is only a potential threat of violating their right to privacy. Doubts may arise whether we are dealing with a direct assault in a situation when the employer attempts directly to violate the privacy of a worker (e.g. asks the worker a question concerning information from the private sphere), but the violation itself will only take place after a longer time (e.g. if the worker is supposed to answer such question only after a week). It should be assumed that in such circumstances the assault on the worker's privacy is of a continuous nature. Thus, exercising the right to lie even after a long time after the moment when the assault started does not deprive it from the attribute of directness.

Thirdly, the action that violates privacy has to be unlawful. It should be pointed out that violating the right to privacy is not always illegal. The employer will have the right to infringe upon the privacy sphere in many cases, e.g. if private data are obtained in the course of monitoring the worker's Internet activity while using company equipment without

the permission of the employer. In such event, the worker will not be entitled to lie in order to attempt to conceal private information.

Unlike in the event of the usual self-defence, for the institution of the right to lie one should accept the possibility that the assault will be caused not by a natural person, but by an organisational unit. In employment relationship, violations of privacy will often occur not as a result of the actions of a specific individual, but of mechanisms and procedures implemented by the employer (who is often an organisational unit, not a natural person).

This leads to the question, whether all the employed persons, regardless of the basis for employment, may exercise the right to lie or whether it is a right, to which only workers employed pursuant to employment contracts are entitled? It is likely that the situation of a worker who remains strictly subordinated should be evaluated differently than that of a person whose employment is based on a civil law contract, where the degree of subordination is not as strict as in employment relationship. To answer this question, one should point out, first of all, that every person, regardless of the basis for employment, is entitled to the right to privacy. However, non-employment relationship does not involve such a high degree of subordination as the relationship between a worker and an employer. Although this does not result in a reduced scope of privacy protection, it increases the degree of freedom of the worker. Workers who are not subordinated are subject to the pressure of employer to a lesser extent, and thus, it is easier for them to refuse to provide certain information without fear of negative consequences. As a result, one should consider that such workers may not use the concept of the right to lie to protect their privacy to such an extent as others.

Due to the above, the degree of subordination of the worker to the employer may be one of the factors determining the scope of application of the right to lie to protect one's privacy. A worker who is more independent in the organisational sphere of employment may not enjoy the same degree of protection. As it has already been mentioned before, this does not refer to protection as such, because everybody has the same right to privacy, but to the possibility to refuse consent to certain actions or to provide an answer. A worker who remains in close organisational and structural co-operation with the employer, which in turn

makes him economically dependent, will be entitled to use the right to lie more often and to a greater extent than a person who only provides specific services for the employing party. In such event, the term "direct assault" will be applicable more often.

In line with the proposed concept of self-defence it should be proportional to the nature of the violation. Proportionality means that the applied defensive measures should be necessary on the one hand, and on the other hand sufficient to achieve the goal in form of defending arbitrary violation of property. This will be determined, first of all, by the scope and intensity of the defensive measures used. This means that the workers, when giving a false answer, should not provide information that would put them in a much better light than necessary to conceal the actual situation. Obviously, the issue of proportionality should always be considered *ad causa*, because it is impossible to formulate a general rule.

It should be pointed out that self-defence is also considered disproportionate in cases when the attacked party could have used other means to counteract the assault (in other words, if defence was not necessary). Such situation may occur in cases when the worker may use institutions established for the protection of workers (such as the Labour Inspection or trade unions) instead of lying.

Self-defence is usually active; it is passive only in exceptional cases. It seems that, as far as the right to lie is concerned, self-defence will often consist in refusing to answer a question or the omission of certain issues. Such passive behaviour may also convince the other party that the factual state is different from reality, which is commonly interpreted as lying. However, if the conditions specified hereinabove are met, such action cannot constitute grounds for negative consequences for the worker.

Recognising that the "right to lie" is acceptable results in the fact that the actions of a worker who is trying to protect their privacy against unlawful actions of the employer are legal. As a result, the employer cannot refer to the defect of a statement of will (fraud) if they enter into a legal action with the worker based on an untruthful answer. For example, the employer cannot withdraw from a pay raise or promotion granted to the worker pursuant to an agreement. According to

the presented concept, the lies told by a worker in the circumstances specified above cannot constitute a basis for termination of employment relationship, either (Drozd 2004, p. 167[37]).

It is worth considering, what happens in situations when the worker who is not telling the truth, exceeds the limits of lie resulting from the right to lie. In the light of necessary self-defence, exceeding the acceptable limits may lead to various consequences. In civil law, the dominant view states that each violation of the limits of necessary self-defence renders the actions of the person exercising the right to such self-defence unlawful, if these actions violate the existing legal provisions. In employment relationships, this will mean that the employer may terminate the employment contract with such worker or charge him with disciplinary liability.

However, certain legal systems (mainly criminal law) foresee the possibility to reduce the liability of the defender and sometimes even to release the defending party from such liability in situations when the limits of necessary self-defence have been exceeded either by using a disproportionate defensive measure or if the self-defence resulted from fear or anxiety caused by the assaulting party. In our opinion, both these cases should be taken into consideration when evaluating the behaviour of a worker who exercises their right to lie. If the worker lies excessively in a situation when the employer violates his right to privacy by their actions, it should be possible to assume that such behaviour is justified and that the worker should not be held responsible for it. Exemption from negative consequences for exceeding the right to lie should also be possible in cases when the worker is subject to strong pressure or even threats of the employer. Unfortunately, such situations are quite common in employment relationships and one should consider that the worker, as the usually weaker party to such relationship, will not always be able to assess correctly whether lying used to defend their privacy is an adequate measure in reference to the actions of the employer. If it is considered that circumstances justifying the excession of the limits of the right to lie existed, in the situations described above the liability of the worker should be limited (e.g. the worker should receive a reprimand instead of termination of the employment contract).

Summary

The right to lie may constitute an essential element of workers' privacy protection. It allows to counterbalance the strong position of the employer, who may often attempt to force workers to provide certain information. This is becoming increasingly important in the era of new means of control and monitoring of workers that may be applied by employers and in the light of the visible tendency to narrow the interpretation of the workers' right to privacy. In order to enable it, it is necessary to introduce mechanisms that would clearly guarantee that no sanctions will be applied against a worker for not telling the truth in situations when the actions of the employer attempt to violate or violate the privacy of the worker. However, at the same time, one should note the risk connected with granting workers the right to lie, as workers might abuse it, trying to conceal inconvenient information.

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8

Employer or Big Brother? Data Analytics and Incursions into Workers' Personal Lives

Leora F. Eisenstadt

Introduction

Imagine a workplace in which the employer has access to millions of bits of data about its employees—their off-duty hobbies, consumer preferences, and political views; the fact that they are contemplating becoming pregnant or concerned about developing diabetes; their heart rates and sleep patterns; even their state of mind when arriving to and leaving from work. What if that employer could use all of that information to make decisions about the design of the workplace, create teams and identify potential leaders, determine insurance rates for workers, and offer professional development opportunities? This, unbeknownst to many of us, is the modern-day workplace. Because of our

This chapter is adapted from: Leora Eisenstadt, *Data Analytics and the Erosion of the Work/Non-Work Divide*, 56(3) American Business Law 445 Journal (2019).

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_8

reliance on the internet, our addiction to social media, and our general disregard for privacy concerns, most of us have left enormous data trails that employers are now beginning to access in order to create the most efficient workplaces possible. (Zomorodi 2017).[1] In so doing, however, they have extended their reach beyond the information that was previously available—information gleaned from workers at work—and have begun to collect and use data on employees' personal lives. While this data may be useful to employers, collection of and reliance on such information also constitutes a new overreach that will likely erode the division between work and non-work lives to the detriment of all parties to the employment relationship.

The use of **big data** by employers is of particular concern from both ethical and legal perspectives. Remarkably, there is a dearth of legal regulation specifically governing this data gathering and use. In the last several years, scholars have begun to focus on the ethical implications of data analytics at work, the privacy issues created by these technological advances, and the ways in which existing discrimination law is and is not implicated (Bodie et al. 2017; Kim 2017; Crawford and Schultz 2014; Barocas and Selbst 2016). But **data analytics** also has the potential to dramatically alter the dividing line between work and non-work spheres with long-term implications for the employment relationship.

Under U.S. law, there are statutory and doctrinal conceptions of work and non-work time that have both legal and cultural implications. This division protects employers and employees alike. The explosion of technological advances that allow employers to monitor and rely upon worker's **off-duty conduct** will likely weaken the dividing line between work and non-work in dramatically greater and more troubling ways than ever before.

Examples of Data Incursions into Non-work Lives

The use of data analytics by employers takes numerous forms, some more benign than others. From analysis of meta-data on employees' social media profiles to the use of facial scanning software to detect

employee emotional states, the programs discussed below all make use of new technology to learn about employees' personal lives and put that information to use in the workplace.

A. Project Comet

Perhaps the most far-reaching example of a data analytics program that reaches into employee's personal lives is **Project Comet**, a program that mines data from employees' social media accounts and then analyzes the information for use by the employer.[2] When individuals use **social media** platforms like Facebook, they "create individualized profiles where they can share status updates, photos, wall posts, and more" and generally post information on their "leisure habits, party and drinking habits, gender, age, sexual preference, parenthood, or relationship status; details about their friends, race, language, location, education, and work history; comments reflecting their inner thoughts, views, and attitudes; and other personal data." (Yanisky-Ravid 2014, pp. 61–62). Project Comet uses text mining and data scrapping, tools that search through the entirety of an individuals' **social media** feed, aggregate the data into a secure database, apply a sorting algorithm, and then classify information into categories for easier interpretation.[3] In deploying Project Comet, the company includes a provision in its employment policies alerting workers that it may access social media accounts associated with company log-ins.[4] The company is then able to use the metadata of its employees through Facebook itself and does not need to have access to the employees' profiles on the front end.[5]

Project Comet is a tool used by a major U.S. healthcare company and has several existing applications with more in development. The tool was first created as a means of building better teams.[6] For this purpose, the **algorithm** is fed data on existing **successful teams**, including tens of thousands of variables on the team members' hobbies, consumer preferences, interests, habits, and beliefs that, in combination, create positive working relationships. The program can then search for these variables in all employees and determine how to combine employees into teams to replicate the original successful one. For example, the algorithm could identify that combining workers who drink beer on the weekends and listen to folk music with those who support conservative political candidates and like to paint in water colors correlates with

positive outcomes.[7] It can then scan all workers' social media profiles for these and other variables and use them to determine working partners, team structures, and group leaders.[8] The second application of Project Comet is in the health insurance context. The employer has begun to mine employees' social media accounts for data on **risky behaviors**. Data is gathered on likely-for-injury or high-risk activities and individuals are rated accordingly.[9] For example, the program looks for smoking, excessive drinking, and drug use, along with risky sports and the like.[10] Once employees are rated, the company considers trends across geographic areas and determines insurance rates accordingly. If, for example, the program finds that employees in the Midwest have overall higher risk ratings than those on the West Coast, the company will set **health insurance rates** for the Midwest employees higher than for West Coast employees.[11]

In addition to these existing applications, Project Comet may soon be used for numerous other purposes. The program can analyze social media data to determine the best seating arrangements for employees.[12] It may be used to determine which employees possess leadership capabilities and should be given additional training or professional development opportunities.[13] And, eventually, the program may assist managers in selecting candidates for downsizing or for promotions.[14] If the algorithm can be provided with variables that correlate with workplace success or failure, this can be applied on a massive scale to make employment-related decisions. There is no need to demonstrate how or why these variables correlate with success or failure—evidence of causation is irrelevant. If the algorithm can predict with 99% accuracy, **correlation** is all that matters.[15] (Samuel 2018).

B. Castlight Health

In the area of health management, Castlight Health ("Castlight") is using data analytics to provide employers with predictive data on employees' personal lives. Castlight is a third-party entity that provides services through an employer to its employees, including the ability to track health care spending and search for in-network doctors. (Zarya 2016; Areheart and Roberts 2019). **Castlight** is an optional service; however, when employees opt in, they give permission to Castlight to share their data with the employer (Zarya 2016). The company counts

several major employers as clients, including Walmart and Time Warner and thus potentially has access to data on millions of employees (Zarya 2016).

The data Castlight collects and shares decidedly involves employees' personal activities, plans, and even thoughts. It has the ability to identify segments of the employee population that are contemplating major health decisions. For example, through internet searches, physician specialist searches, and changes to prescription purchases, Castlight can identify which employees are contemplating becoming **pregnant**, which employees are concerned about developing diabetes, or those who believe they may need back surgery in the near future (Zarya 2016). The company claims that although it can identify precisely which individuals are contemplating these **health changes**, it only shares "top-level numbers with its client." (Zarya 2016).

> For example, Castlight can tell a client that its workforce includes 60 women who are currently trying to have children, but it will not disclose the names of those employees. It also caps the size of any group it will single out at 40 people, since it believes that any smaller group could allow the client to identify the individual employees. (Zarya 2016)

Of course, depending on the size of the employer or the department being considered, the demographic makeup of the workforce, and particularly with respect to those contemplating pregnancy, the number of fertile-age women, it may not be difficult for an employer to identify specific employees despite Castlight's self-imposed restrictions (Zarya 2016).[16] And even without the ability to pinpoint specific individuals, the knowledge that a certain percentage of its workforce is contemplating pregnancy or expecting a life-changing diagnosis could still lead the company to make decisions about promotions, hiring, and terminations based on this information. As one scholar has noted, "If [an employer] originally thought that 15% of the women in its employee base may become pregnant, but data shows it's closer to 30%, that could lead an employer to say we cannot hire as many female employees this year because we can't afford them being out for family leave." (Zarya 2016).

This **health-related data**, which appears to be so personal in nature, may be accessed and shared because the **Health Insurance Portability and Accountability Act of 1996 (HIPAA)**, which mandates protection of certain health information, likely does not apply to data gleaned from search queries and insurance claims. (Zarya 2016; Bodie et al. 2017, p. 999)[17] Similarly, the **Pregnancy Discrimination Act**,[18] which is an amendment to Title VII of the Civil Rights Act of 1964 and makes clear that discrimination on the basis of pregnancy is a form of discrimination "on the basis of sex" may not apply here since its provisions cover pregnancy and related conditions and not those who are merely contemplating pregnancy. (Widiss 2013, p. 963)[19] As is likely obvious, the information that Castlight collects and shares with employers may be useful for making work-related decisions but is based on the off-duty activities, thoughts, and concerns of workers.

C. Facial Scanning

A number of companies are looking beyond data on employees' activities and into their emotional states with the aim of improving productivity as a result. One set of computer scientists at Sathyabama University in India has recently proposed using machine learning to detect **employee emotions** through **facial scanning** software (Subhashinia and Niveditha 2015). The scientists contend that it is useful to track employee emotions since they directly influence the major sources of competitive advantage. As a result, if an organization can detect and alter an employee's negative emotions, it may be able to "make it right before it affects … productivity." (Subhashinia and Niveditha 2015, p. 531). They propose using facial scanning software to detect human emotions from the employee's image, captured as the individual enters the workplace at the start of the workday (Subhashinia and Niveditha 2015, p. 531).

The proposed system would operate much like a system in which employees swipe an ID card to demonstrate their presence at work. Instead of a card swipe, a camera would capture a picture of the employee's face upon entering the workplace. "As each face is captured they are analyzed [sic] simultaneously and results are displayed." (Subhashinia and Niveditha 2015, p. 531). The eyes and lips are separated and compared to images in a database. This comparison detects

the individual's emotion at that moment. The purpose, as described by its creators is to improve productivity: "It shows whether they are happy, sad, depressed or angry. This analyzing makes a better working environment for a better productivity." (Subhashinia and Niveditha 2015, p. 531). Given that this program analyzes employees' emotional states when they arrive at work, it is, in fact, gathering data on their personal lives. The fact that gathering data on these emotions may positively impact **productivity** does not alter the reality that this technology would constitute an intrusion into the personal lives and emotions of workers. In fact, it is clear that all of these examples of data analytics can be beneficial to employers. The question is: at what cost?

D. The New Problems Created by Off-Duty Data Use

Legal scholars have begun debating the benefits and problems presented by the use of data analytics, particularly in the workplace. Scholars have primarily focused on ethical implications, privacy issues, and the potential for bias to infect data. Even before the advent of data analytics, scholars lamented employer incursions into workers' personal lives through more traditional means—reviewing employees' email, phone, and internet use, monitoring social media accounts (as "friends"), and mandating that workers report to employers on health issues including smoking and exercise. The programs described above that rely on off-duty data collection and analysis have essentially added two problematic elements to the existing reality—(1) the ability to gather and analyze massive amounts of off-duty data from thousands of employees in a way that is not immediately obvious or **transparent** to employees and (2) the ability to draw **correlations** between seemingly unrelated bits of **off-duty data** and predictions of workplace success (Peck 2013; Bodie et al. 2017).[20]

First, the incursion into an employee's off-duty time is no longer regularly apparent to the employee. This lack of meaningful transparency is a new and extremely troubling component of the data analytics revolution. When a lawyer takes a Skype call for work from her living room, when an accountant uses his company laptop for internet shopping, when a pharmaceutical representative makes personal calls on her company cell phone while driving between sales calls, when a nurse uses his Facebook account to complain about hospital policies, these workers are

all aware, to some extent, that their employers have access to their personal information and make the choice to allow that incursion to make their lives easier and more convenient. In contrast, when an employer uses an employee's social media meta-data to find candidates for promotion, the small print buried in the employment contract that allows the employer to access that data is not at the forefront of the employee's mind. The same is true for the employee who signs up for Castlight Health to streamline management of her co-pays and prescriptions and does not consider the data analytics possibilities that allow her employer to accurately predict her health concerns and family planning thoughts. And while employees may know that their picture is being taken when they enter the workplace, they undoubtedly will not realize that the picture is being used by a highly accurate computer program to detect their emotions and that this information is shared with the employer for numerous purposes. Incursions into the non-work sphere have become a regular feature of the modern workplace but the incursions made possible by data analytics are different. They are far less **transparent** and much less obviously related to the work of the employee and the goals of the employer.

Second, the fact that an algorithm can make connections between seemingly innocuous consumer preferences, hobbies, and interests and workplace success is a new and troubling feature. Employees generally believe they are being evaluated on the basis of at-work performance and possibly any off-duty conduct that negatively impacts their employer's reputation or brand. Most workers, however, will likely chafe at the notion that their taste in beer, love of indie rock, and preference for the Washington Post along with thousands of other variables can be used to determine professional development opportunities, leadership potential, and future career success. Similarly, an employer's ability to **correlate** predictive data on health concerns and emotional states with workplace success, and ultimately try to adjust their workers' off-duty behavior to maximize their at-work potential suggests a level of control that many workers will find distasteful at best. These differences—the quantity of information, lack of transparency, and lack of foreseeability—make the **data-based incursions** into workers' off-duty lives even more troubling.

The Division Between Work and Non-work Time

Although there is no single statute in the United States that creates a division between work life and personal life, and although the line between the two has begun to fray, there are several statutes and common law doctrines that together give rise to the notion of a **work/non-work divide**. This notion is both cultural and legal in nature. As millennials enter the workforce in greater numbers, bringing with them their values and views of work, the cultural division between work and personal time will likely erode further. Nonetheless, there are financial, physical, and legal benefits to both employers and employees of maintaining some division between work and non-work time. And, the increasing use of data analytics to mine employees' off-duty activities, emotions, ideas, and preferences for use in the workplace has the capacity to encroach on employees' personal lives to such an extent that it may destroy the division altogether.

A. The Work/Non-work Divide in Law

The **Fair Labor Standards Act ("FLSA")** was passed in 1938 as part of the New Deal and "was enacted during a time when workers desired more leisure time away from their jobs but also wanted protection from job insecurity and unemployment." (Alexander 2015, p. 14; Ruan 2013). The FLSA was born out of a social movement in which workers attempted to attain more control over their working and non-working lives. (Malamud 1998, p. 2223). This movement "was predicated on the grand vision of safeguarding workers' non-work time from the demands of employers to ensure that workers would have sufficient leisure time to dedicate to self-development and political participation as citizens." (Lung 2005, p. 57). Despite these auspicious goals, the FLSA as enacted was "a comparatively modest piece of legislation with hours provisions intended mainly as a work-spreading measure to alleviate unemployment." (Lung 2005, p. 57; Bird 2015, pp. 330–333).

Nonetheless, the **FLSA** regulates several aspects of working hours and delineates the activities and blocks of time that must be compensated as work thereby codifying into law the notion of a dividing line between work time and non-work time. The FLSA regulates two major

aspects of working hours: (1) it establishes the forty-hour work week, and (2) it requires overtime pay of one and one-half times the regular rate for any hour worked in excess of forty hours a week. (Lung 2005, p. 58; Alexander 2015, p. 14). In interpreting the FLSA, courts focus on "**compensable**" **work**, distinguishing it from non-compensable time off or activities that are not sufficiently integral to the employee's work to be considered working time.[21] For example, lunch breaks are generally conceived of as **non-work time** and need not be paid whereas "on call" time when an employee is waiting on the employer's premises may or may not be considered working time that must be compensated depending on the agreement between the parties and the nature of the position.[22] Travel time between job sites may be considered compensable work whereas regular commuting from home to work is not typically work time.[23] While courts sometimes struggle with where to draw the line for particular activities, there is an acknowledgment in the law that a line exists for the protection of workers and employers.

This concept of a divide between work and non-work is also evident in state law workers' compensation systems, which rely on the "**course of employment**" notion as a limiting category for employer liability. Like the FLSA, **workers' compensation systems** do not have as their goal the creation of this divide. (Spieler 1994, p. 129). Nonetheless, it is a necessary concept to achieve the programs' aims.

"Workers' compensation is in essence a statutorily-mandated agreement between the employer and employee to compromise in the event the employee suffers injury or disease in the course of employment." (Hutchinson 2011, pp. 327–328). The compromise provides that the workers' compensation system is the exclusive remedy for an employee's at-work injury thereby assuring that "the sacrifices and gains of employees and employers are to some extent put in balance, for, while the employer assumes a new liability without fault, he is relieved of the prospect of large damage verdicts." (Hutchinson 2011, p. 328). Although each state maintains its own worker's compensation statutory scheme, the laws of every state include reference to the "course of employment" concept in delineating when employers are liable for the injuries of their employees. (Burke 2016, p. 363; Fisher 1961, p. 279; Hutchinson 2011, p. 331, n. 49)[24]

As may be expected, the "course of employment" phrase is often the subject of significant debate in litigation and numerous decisions turn on its interpretation. (Hutchinson 2011, p. 331; Hance 2013, p. 582). When courts refer to the "in the course of employment" requirement, they are generally interested in "the time, place, and manner of the accident" as a means of determining the work-connectedness of the injury. (Hance 2013, p. 582). Regardless of where a particular court draws this boundary, one of the key concepts on which all workers' compensation laws are based is the notion of a distinction between work and non-work spheres. It is a given that there is such a distinction, and it is the role of the court in these cases to determine where, not if that line sits.

Finally, from the perspective of agency law and questions of employer liability, the notion of work versus non-work spheres arises in determinations of employer liability for employees' tortious conduct under the common law doctrine of ***respondeat superior***. (Bodie 2013, p. 668). Under this doctrine, employers are responsible for the torts of their employees when committed within the "**scope of employment**." This concept, integral to the division between work and non-work time is defined by the **Restatement (Second) of Agency** § 228 as follows:

> (1) Conduct of a servant is within the scope of employment if, but only if:
> (a) it is of the kind he is employed to perform;
> (b) it occurs substantially within the authorized time and space limits;
> (c) it is actuated, at least in part, by a purpose to serve the master, and
> (d) if force is intentionally used by the servant against another, the use of force is not unexpectable by the master.
> (2) Conduct of a servant is not within the scope of employment if it is different in kind from that authorized, far beyond the authorized time or space limits, or too little actuated by a purpose to serve the master.[25]

These factors have always been somewhat blurry, necessitating interpretation based on the factual circumstances presented to the court in a given case. (Parker 2007, p. 703). Regardless of where the boundary is drawn in any given case, it goes without saying that the existence of a

boundary is a given and is essential to the notion of employer liability under ***respondeat superior***. Absent some divide between work and non-work activities, employers would find themselves liable for anything an employee did at work, at home, and everywhere in between. Like the FLSA, and workers' compensation laws, the goal of the *respondeat superior* doctrine was not to create or enforce a division between work and non-work spheres. Nonetheless, that division is both essential to the doctrine's efficacy and is re-enforced by its application.

The **work/non-work divide** is both a legal and a cultural concept. As the following section will demonstrate, the concept brings with it numerous benefits for both parties in the employment relationship.

B. The Work/Non-work Divide Benefits Workers and Employers

For many workers and policy makers, the concept of work versus non-work spheres remains sacrosanct because it protects employers and employees alike in several ways. This divide yields financial, health, and legal benefits to both parties to the employment relationship. From the perspective of employees, a divide between work and off-duty time affords employees a measure of **privacy** and **freedom** in their personal lives, allows for employees to pursue interests unrelated to their employers' goals, and provides the basis for an attempt at **work-life balance**. In general, employees tend to be protective of their personal spheres. In an empirical study of **Millennial** workers' attitudes about online privacy, researchers found that a majority of these workers, who tend to be less concerned about privacy than prior generations, believe strongly in a separation between work and personal life. In addition, it is widely accepted that "**work-life balance**," impossible without some separation between work and non-work spheres, is an important feature of a healthy life. (Abril et al. 2012, p. 66; Landrum 2017).[26] As one psychologist described it: "[People] need time outside of work for rejuvenation, and to develop and nurture friendships and their "non-work selves." (Burn 2015). Employees agree. In 2009, research conducted by the Corporate Executive Board concluded that "work-life balance now ranks as one of the most important workplace attributes—second only to compensation." (Corporate Executive Board 2009; Carlson 2012, p. 386).

From the employer's perspective, a strong divide between work and non-work serves several purposes. Employers benefit in real, financial terms when their employees feel a sense of work-life balance and maintain non-work interests, activities, and relaxation time. Employers who implement **work-life balance programs** see benefits in retention, recruiting, loyalty, productivity, collegiality, and corporate image. (Williams 2004, p. 376; Burn 2015; Bird 2015, p. 338; Simpson 2012, p. 297). In terms of actual costs, a lack of work-life balance can lead to significant attrition and "[s]tandard human resource estimates are that it costs between 75 percent and 150 percent of a worker's annual salary to replace someone when they leave, with the cost of replacing professionals at the high end of that range." (Williams 2004, p. 377; Williams 2000, p. 88). This cost is the result of "[l]ost institutional knowledge, including the company's way of doing business; [l]ost relationships with internal clients and colleagues; [l]ost productivity as the departing [worker] looks for a new position; [l]ost productivity while the position is unfilled; [and] [a]dministrative costs associated with a departing employee." (Williams 2004, p. 379). The market has also caught on to the financial benefits of maintaining a divide between work and non-work life. "A review of Wall Street Journal announcements found a significant and positive relationship between stock price and the announcement of a work-family initiative. Another study found a similarly positive reaction from the market, especially when the firm was pioneering work-life policy rather than a follower firm adopting the same policy after others." (Bird 2015, p. 336).

In addition to the financial benefits to employers from a division between work and non-work life, there are also legal benefits to this notion. From the perspective of **agency law**, the concept of a divide between work and non-work spheres actually protects employers from liability for their employees' off-duty conduct. Although the factors used to determine the "**scope of employment**" are somewhat vague, the test is an employer's best protective mechanism against liability for employees' activities when they are not "technically" at work. (Bodie 2013, p. 668). For example, an employee who heads to a bar after a particularly bad day in the office and subsequently ends up in a brawl with another drunk patron is generally not acting within the scope

of his employment despite the fact that he ended up in that position because of his experiences at work that day.[27] Similarly, employers are generally not liable when employees get into car accidents on their way to or from work.[28] The separation created by the notion of a "scope of employment" undoubtedly benefits employers who might otherwise be vulnerable to suit for a wide variety of seemingly unrelated employee actions. Erosions or expansions of this doctrine should be an area of concern for employers.

C. Existing Weakening of the Work/Non-work Divide

Despite statutory and common law-created notions of a work/non-work divide and the benefits of separate spheres to both parties in an employment relationship, a number of legal and societal factors have contributed to a gradual erosion of the separation between these spheres. It is important to both acknowledge this erosion and to highlight the ways in which data analytics can exacerbate this process.

First, the **FLSA** itself is not effective at creating a separation between work and non-work time for many American workers. The FLSA exempts numerous classes of workers from the Act's overtime protections, "most notably those who are 'employed in a bona fide executive, administrative, or professional capacity.'" (Lung 2005, p. 58).[29] In addition, "the Act fails to provide workers with any affirmative protection from being compelled to work **excessive hours** against their will." (Lung 2005, p. 58). There is nothing in the statute that restricts the number of hours an employee may be required to work so long as he is paid at the overtime rate for hours in excess of the regular work week. (Lung 2005, p. 58). Furthermore, "the Act contains no provisions that guarantee workers a minimum number of rest days" nor does it contain any "safeguards for workers against retaliation for refusing to work overtime, no matter how excessive or unreasonable the employer's demand." (Lung 2005, p. 58). The employer's resulting exclusive ability to dictate when and how long an employee must work in order to keep his job serves to weaken the notion that employees have designated non-work time that is somehow sacrosanct. (Lung 2005, p. 53).

In addition, the increasing reliance on **independent contractors** has begun to erode the work/non-work divide. Independent contractors often control the time and location of their work, allowing them to

blend work and personal time in ways that a traditional employee cannot. (Atmore 2017, p. 905; Cohen and Eimicke 2013, pp. 10–11).[30] The advent of the "sharing economy," in which individuals can pick up work and earn money through apps like Uber (car sharing), Taskrabbit (home service tasks), and AirBnB (home/room rentals), has further exacerbated this situation. (Cherry and Aloisi 2017, pp. 640–42).[31] These **sharing economy** companies allow workers significant flexibility in time and geographic location. A sharing economy worker can work sporadically throughout the day or night, from his home, car, or a coffee shop. (Thompson 2014, p. 250). While beneficial in creating worker flexibility, these arrangements also significantly contribute to the weakening of the dividing line between work and non-work both for workers in the sharing economy and for workers in traditional employment relationships who are undoubtedly affected by an emerging societal expectation that work can be completed anywhere and anytime. (Thompson 2014, p. 250).

Traditional employees are also increasingly behaving in ways that erode the work/non-work divide. Many employees routinely rely on technology to do their **work from home**, on the road, or anywhere else, and are working "after-hours" because of the ever-present nature of email and other means of connection. (Sonne 2008, pp. 146–147; Howie and Shapero 2005, p. 35). In addition, employees routinely use their **company-provided devices** both for work and personal activities. (Yanisky-Ravid 2014, p. 57; Meece 2011).[32] Workers typically sign technology policies in which they acknowledge that the employer has access to everything done on the employer-provided device. (Abril et al. 2012, pp. 69–71; Fink 2014). Nonetheless, this technical knowledge rarely stops employees from using those devices for personal email, personal social media networking, and communication of thoughts, pictures, and other information that they would not actively want to share with their employers. (Abril et al. 2012, pp. 69–71). Millennials are particularly prone to such activities, acknowledging that they "generally want privacy from unintended employer eyes, and yet they share a significant amount of personal information online, knowing it could become available to employers and others." (Abril et al. 2012, p. 66). This willful blindness to the ways in which use of company technology

erodes employee privacy is another manifestation of the weakening work/non-work divide.

D. Big Data's Erosion of the Work/Non-work Divide

Despite the existing weakening of the work/non-work divide, companies' new uses of data analytics to delve into employees' emotions, beliefs, non-work activities, and mental states raises new ethical and legal concerns. The process of gathering and using massive quantities of non-work data to make work-related decisions weakens the distinction between what is work and what is not. Despite the financial benefits to employers who use data analytics in these ways, the new and more dramatic erosion of the distinction between work and non-work that results from these programs is ultimately detrimental to employees and employers alike.

The consequences of the blurring of the work/non-work divide are problematic for employees, employers, and society in general. From the employee's perspective, any attempts at a **separation of work and personal life** to maintain physical and mental health will necessarily be hampered by the digitally-driven erosion of that divide. The ability to "turn off" work-related thoughts and decisions to focus on personal interests, family, and one's health become far more difficult if one's employer is constantly monitoring the employee's off-duty life. In addition, the loss of **privacy and personal freedom** is palpably troubling. The notion that everything one does in his personal time may be used to make workplace decisions means the employer is always, to some extent, in control. This will eventually impact how individuals behave, restricting their speech, activities, and even thoughts. If a worker eventually understands that her boss is using aspects of her personal life to predict her workplace success, she should and will begin to adjust her consumer preferences, off-duty activities, and personal beliefs to match what her employer deems to be a recipe for success. As a society, we should be concerned about the detrimental impact this may have on autonomous thought, engagement in public life, and even market participation.

Although less obvious, employers too should be concerned about the ways in which the erosion of the work/non-work divide will impact the "**scope of employment**" and employer attempts to avoid liability

for workers' actions. The concept of the "scope of employment" can include the "zone of activity *related to* employment duties," making the employer liable for an employee tort even if the action itself is technically "outside of the employee's duties or authority." (Bodie 2013, p. 692).[33] A 1928 opinion from a Connecticut court construed the doctrine of ***respondeat superior*** to include a broad swath of employee activity. ***Ackerson v. Erwin M. Jennings Co.***,[34] involved an auto sales agency that invited employees out to a dinner in appreciation of their services to the company.[35] One of the managers drove the other employees in a company car and, on the way back from the dinner, crashed, killing one passenger, and seriously injuring another.[36] Despite the fact that the dinner was meant as a purely enjoyable outing to show appreciation for the workers, the court rejected the lower court's directed verdict for the company.[37] "[T]he jury might reasonably have found that the occasion was intended principally if not solely to promote legitimate and important interests of the defendant's business, viz., harmony, co-operation, and good will among the employees" and was therefore within the scope of employment.[38] As early as 1928, long before employees used company-issued cell phones and computers, before employees regularly worked from home, and before technology made it possible to track employees' off-duty conduct, emotions, and thoughts, the ***Ackerson*** court understood that once a personal activity has some tangible connection to the employer's goals, it can become job-related such that employer liability may attach.[39]

Given this longstanding approach to liability and the employment relationship, it is not difficult to see how the "scope of employment" and related **negligence doctrines** might be expanded to incorporate all those activities that employees engage in on their off-duty time if the employer uses them to make work-related determinations. If an employer, using Project Comet, relies on employees' off-duty hobbies, consumer preferences, and risky behaviors in an effort to find candidates for promotion or determine insurance rates, an employer may eventually be liable for that employee's tortious off-duty activities as well. (Ishman 2000, p. 122). And courts may soon conclude that if an employer can detect and rely upon an employee's personal, unexpressed health concerns, the employer should be liable for making demands on

the employee that it knew or should have known would exacerbate a health concern or hasten an illness. Likewise, if the employer regularly identifies and aims to "fix" the emotions of its employees, it may be liable for an employee's violent outburst at work that harms other employees since it was **foreseeable** based on the data the employer actively analyzed and used. (Lane 2003, pp. 186–88).[40] These suggestions may seem like a stretch but it is clear that the use of off-duty data and its massive erosion of any divide between work and non-work spheres has at the very least, made the slope far more slippery.

Conclusion

With the enactment of the European Union's General Data Protection Regulation[41] (Satariano 2018), the Cambridge Analytica scandal (Confessore 2018), and Facebook's Mark Zuckerberg's testimony before the U.S. Senate,[42] the notion of data privacy and companies' ability to monitor and use our most personal information is ever-present. While the focus has been on companies' access to and manipulation of consumer data, employers of all sizes have been participating in this data revolution as well.

Data analytics technology uses algorithms to capture, analyze, and categorize massive quantities of data that the human brain, on its own, cannot make sense of. This technological revolution offers tremendous benefits to employers including the ability to track and explore the work and personal lives of their employees. Nonetheless, this new technology has significant downsides. This chapter has explored the ways in which data analytics allows employers to go beyond **workplace data** and gather and use information on **employees' personal lives**. As a result, data analytics has the potential to dramatically alter and erode the division between work and non-work spheres, a division that is important to employee well-being but also to employers' bottom lines and exposure to legal liability.

As a society, we must decide whether the divide between work and non-work spheres is a communal good that should be protected and to what extent. Regardless of where Americans come down on this

question, we should be actively choosing a course rather than mindlessly submitting to the technology's appeal.

Notes

1. See *The Enormous Data Trail We Generate Throughout the Day*, BBVA (Aug. 24, 2016), https://www.bbva.com/en/the-enormous-data-trail-we-generate-throughout-the-day.
2. Memorandum from Michael Gangnath on Project Comet design and functionality (April 1, 2017) (on file with author); E-mail from Michael Gangnath to Leora F. Eisenstadt (Dec. 21, 2017, 10:17 p.m.) (on file with author).
3. See Memorandum from Michal Gangnath, *supra* note ii.
4. Id.
5. Id.
6. Id.
7. See id.
8. Id. The approach Project Comet takes is similar to that used by Target to determine which of its customers were pregnant with the aim of improving targeted advertising. The algorithm takes seemingly unrelated purchasing histories and makes remarkably accurate predictions about its customers' pregnancy status.
9. See E-mail from Michael Gangnath to Leora Eisenstadt, *supra* note ii.
10. Id.
11. Id.
12. Id.
13. Id.
14. Id.
15. Id.
16. As James Hodge notes, "the data gathered by the company could still be used to penalize employees who did not opt in. 'You only need a random sampling and you can then extrapolate meaningful and actionable data' based on a significant sample. In other words, Walmart doesn't need every one of its 1.4 million U.S. employees to opt into Castlight—it can make do with a few thousand." (Zarya 2016).
17. Bodie and co-authors discuss the aggregation of pregnancy planning and other data and note that "such aggregation can feel disturbing,

even threatening, to employees, as it gives the employer an informational advantage. But currently, there is little in the way of legal protection against such aggregation. If the data is legally obtained, it can generally be analyzed however the employer sees fit." (Bodie et al. 2017, p. 999).

18. Pub. L. No. 95-555, 92 Stat. 2076 (1978) (codified at 42 U.S.C. § 2000e(k) (2012)).
19. There may be an argument to be made that an adverse action based on an employee's contemplation of pregnancy constitutes unlawful sex discrimination under Title VII since only women can become pregnant. See Int'l Union v. Johnson Controls, 499 U.S. 187 (1991) (holding that employer's policy of excluding women who were pregnant or capable of bearing children from jobs involving lead exposure was impermissible sex discrimination under Title VII).
20. "There's been a real sea change in the past five years, where the quantities have just grown so large—petabytes, exabytes, zetta—that you start to be able to do things you never could before." (Peck 2013). Others also point out that "[e]mployers have always monitored employees to determine how they perform on the job. People analytics methods seek to capture masses of quantitative data to reveal hidden patterns that are correlated with employee success or failure." (Bodie et al. 2017, p. 987).
21. Sandel v. Fairfield Indus., No. 4:13-CV-1596, 2015 U.S. Dist. LEXIS 161555, at *5-6 (S.D. Tex. June 25, 2015) ("Notably, only hours that are spent on tasks that the employee is "employed to perform" are compensable. Compensable activities are those activities that are "integral and indispensable" to an employee's "principal activity or activities." (citing Integrity Staffing Solutions, Inc. v. Busk, 135 S.Ct. 513, 519 [2014]).
22. See, e.g., Mendez v. U.S. Nonwovens Corp., 314 F.R.D. 30, 49 (E.D.N.Y. 2016) ("employees are not entitled to compensation during break periods when they are not working"); Owens v. Local No. 169, Ass'n of W. Pulp & Paper Worker, 971 F.2d 347, 350 (9th Cir. 1992) (holding that on-call waiting time was not compensable work because of the express, constructive and collective bargaining agreements between the parties).
23. See Kuebel v. Black & Decker Inc., 643 F.3d 352, 361, 361 n.4 (2d Cir. 2011) (noting that ordinary home to work travel is outside the

coverage of the FLSA but that travel time between stores during the workday may be fully compensable under the FLSA); Beecher v. TWC Admin. LLC, No. 15-CV-00154-WMS-JJM, 2016 U.S. Dist. LEXIS 112617, at *17 (W.D.N.Y. Aug. 22, 2016) ("In an opinion letter dated March 10, 2009 (RO 09-0023) [67-11], the [N.Y. State] DOL responded to an inquiry as to whether travel time from one job site to another job site was compensable. The DOL distinguished the travel between work sites from travel commuting to and from work 'at the beginning and end of the workday' which it deemed to be non-compensable because the employee was free to engage in personal pursuits and activities.").

24. "The phrase 'arising out of and in the course of employment' appears in the workers' compensation laws of every state." (Burke 2016, p. 363). See also Ala. Code § 25-5-1(9) (2011); Alaska Stat. § 23.30.395(2) (2011); Ariz. Const. art. XVIII, § 8; Arkansas Code Ann. § 11-9-102(4)(A) (West 2011); Colo. Rev. Stat. Ann. § 8-40-201(14) (West 2011); Del. Code Ann. tit. 19, § 2301(4) (West 2011); Fla. Stat. Ann. § 440.01 (2011); Ga. Code Ann. § 34-9-1 (West 2011); Kan. Stat. Ann. § 44-501(a) (West 2010).
25. Restatement (Second) of Agency § 228 (1958).
26. Abril and her co-authors describe their survey as follows: "Approximately 2500 Canadian and American undergraduate students answered questions relating to their employment status, privacy expectations concerning employer access to their OSN [online social network] profiles, and the existence of and adherence to OSN workplace policies, among other things." (Abril et al. 2012, p. 97).
27. See Golias v. Wilson, 330 A.2d 96, 97-98 (Conn. Super. Ct. 1974) (Employer was not liable for injuries caused to a third party by the employee when he chose to drive to a physician's office after work for X-rays of an at-work injury since he was not his employer's agent when the accident occurred on the way to the physician's office).
28. See Faber v. Metalweld, Inc., 627 N.E.2d 642 (Ohio Ct. App. 1992) (employer could not be held liable for employee's negligence while driving to work, even though the accident occurred at the job site); Zandria Banks v. United States, Nos. 1:06CV1630, 1:06 CV 2041, 2007 U.S. Dist. LEXIS 51198, 2007 WL 2114653 at *3 (N.D. Ohio Jul. 16, 2007) (an employee who has a fixed and limited place of employment is not, as a matter of law, in the course of his employment when traveling to and from his workplace).

29. 29 U.S.C. § 213(a)(1).
30. "The millennial generation, armed with a MacBook, iPad and iPhone, working out of shared office-spaces, are increasingly attracted to self-employment and contracting, finding it more interesting, lucrative and adaptable to their lifestyles." (Cohen and Eimicke 2013, pp. 10–11).
31. See https://www.uber.com/; https://www.taskrabbit.com/; https://www.airbnb.com/.
32. "There's a palpable sense 'that home has invaded work and work has invaded home and the boundary is likely never to be restored.'" (Meece 2011).
33. Italics added.
34. 107 Conn. 393 (Sup. Ct. Err. 1928).
35. Id. at 396.
36. Id. at 394, 398.
37. Id. at 399.
38. Id. at 397.
39. In addition to liability through *respondeat superior*, foreseeability of behavior also impacts employer liability for direct negligence under negligent retention and negligent supervision theories. See, e.g. Beneke v. Accent Signage Sys., No. 27-CV-13-2275, 2013 Minn. Dist. LEXIS 78 (Minn. Dist. Ct. July 2, 2013) (allowing for possible employer liability for workplace shooting when employer should have known of employee's proclivity toward violence). At least one author has noted that employers can be held directly liable for employee blogging through negligent hiring and negligent supervision of an employee or negligent protection of confidential information, or indirectly liable through *respondeat superior*. (Brown 2005, p. 506).
40. One scholar has noted the "subtle trap lurking for employers in the use of the impressive new surveillance technologies"—since foreseeability is central to employer liability under *respondeat superior*, if employers have more information, this may increase the employer's liability. (Lane 2003, pp. 186–188).
41. General Data Protection Regulation (EU) 2016/679.
42. See *Mark Zuckerberg Testimony: Senators Question Facebook's Commitment to Privacy*, N.Y. Times, April 10, 2018, https://www.nytimes.com/2018/04/10/us/politics/mark-zuckerberg-testimony.html.

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9

Social Work Assessment and Information Systems: A Critique of Managerialist Models and an Agenda for an Alternative Approach

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Introduction: Pressure for Change in the Management of Public Social Services

In recent decades, the expectation of a radical change in public administration has grown in Italy; in particular, bureaucracy should evolve by:

The present chapter is the result of the joint work of the authors. However, sections were authored as follows: "Introduction: Pressure for Change in the Management of Public Social Services", "New Public Management and Social Services in Italy", "Information Systems and Social work in the International Literature and in the Italian Debate" by Roberto Albano; "The Conception of Assessment Within New Public Management and Criticisms", "Assessment and Social Services: Two Key Questions and an Alternative Analysis Perspective" by Ylenia Curzi; "The Social Services Information System (SISS): The Piedmont Case", "Conclusion" by Arianna Radin.

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_9

- Endowing itself with a management with well-defined responsibilities;
- Pursuing clear operational goals which are systematically planned and programmed;
- Assessing, using appropriate and transparent procedures, the actions carried out and the results achieved;
- Enhancing skills and rewarding merit, both at the level of the individual and of the team.

The current climate in which there is an expectation that there will be an improvement in Public Administration is fuelled by conventions, conferences, the creation of ad hoc government agencies, as well as numerous publications on the subject (see, for example, the rich collection of data and reflections published in Dell'Aringa and Della Rocca 2017). Even those who work in public social services, carrying out the delicate function of implementing social policies, are increasingly called, not unlike other categories of civil servants, to provide evidence of the effectiveness, efficiency and flexibility of their work, of their ability to respond to the needs of the different social categories of the population.

This happens in a historical moment when the legitimation criteria at the basis of the existence of these services are changing, even radically. On the one hand, the needs that have to be satisfied are growing and diversifying, both from an objective point of view and from the perspective of social perception: they are increasingly concerned with social categories that are not necessarily poor, and which do not belong to the traditional domain of social services.[1] On the other hand, even in Italy, albeit later than in other European countries and still in an incomplete

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way, the old model of assistance, which was different for each of the various categories of poor and was largely based on voluntary and unprofessional help, is declining as a reference for all social policies in favour of a more universalist and professional model of welfare.

One simple example is the introduction of the "Inclusion Income" (Reddito di Inclusione—hereafter ReI).[2] Despite some limits (Granaglia 2018), this is a universalist welfare payment, a tool to tackle poverty, delivered through a single procedure that progressively replaces the broad supply of provisions intended for particular categories of citizens, provided by various public entities, often in a non-integrated way.

In this way, the view that a highly complex welfare system is required is gradually emerging in Italy: a system able to provide evidence of the total quantity, quality and fairness of the various services offered, to quickly take account of the demands of society, criticism and proposals for improvement. Even though it regards a relatively smaller number of users compared to other welfare sectors (i.e. health and social security), public expenditure on social services is considerable[3] and therefore must be accounted in a clear and transparent manner.

The above-mentioned trends result in two major drivers of change that do not present an obvious convergence. On the one hand, the skills and autonomy of professionals working within these services, especially social workers, need to be substantially improved[4]; on the other hand, it is necessary to equip management with tools for a more widespread and rapid control of the results of the activities and the efficiency and quality of organizational processes. Reconciling these two demands for better-quality services and increased efficiency is possible in principle. In this chapter, we identify three levels of analysis and intervention that may be useful to achieve this objective:

- The way to conceive the assessment (or evaluation)[5] of processes and results in public services, and more specifically in social services, especially with reference to activities involving a highly intensive relationship between professionals and users;
- The implementation of information systems, for the planning and assessment of social services, that are an integral part of the activities

and the decision-making process in the day-to-day performance of social work;
- The more general relationship of social workers with the organizations in which and for which they work or, in other words, the relationship between their organizational mandate on the one hand and their professional and social mandates on the other.

For each of these three levels, we will consider:

- "Managerialism", an ideology underlying New Public Management (hereafter NPM) that has been developed since the 1980s in the Anglo-Saxon countries and which arrived, a decade later, in Italy as well. Even though many scholars believe that NPM has failed to live up to its promises (e.g. Dunleavy et al. 2006; De Vries and Nemec 2013) and is now being progressively replaced by "New Public Governance" (Osborne 2010), we will go on to argue that some of its key precepts, relevant to the purposes of the present analysis, are still valid. However, managerialism is a vision that is significantly at odds with the values, objectives and practices of social work (Tsui and Cheung 2004; Burton and van den Broek 2009). The application of NPM, in a way which is not always consistent and often confused with elements of other models, contributes to the negative attitude of social workers towards evaluation, information systems and the "travail d'organisation" (organizational work), i.e. "the way of producing the structuration of actions aimed at carrying out work" (Terssac 2011, p. 89, our transl.);
- An agenda for an alternative vision, which confers equal dignity to the three mandates (accountabilities) of the social worker—social, professional and organizational ones—even if these are at odds with each other and a synthesis must be sought.[6] Our agenda is not intended to be a prescriptive model, nor is it intended to support any of the specific models currently being discussed in the literature. That said, we will consider the developments of the debate about New Public Governance carefully, if these concern reflections capable of actually acting in discontinuity with NPM. We will also consider other formulations that do this even more clearly: e.g. "Democratic

Professionalism" (Dzur 2004), which emphasizes the democratization of the relationship between the specialists (managers and professionals) involved in the provision of services to the individual and citizens who use these services.

The Conception of Assessment Within New Public Management and Criticisms

Assessment is a central and critical issue to the various waves of public administration reform that have occurred since the 1990s in many economically developed countries. These reforms have consisted of "deliberate changes to the structures and processes of public sector organizations with the objective of getting them (in some sense) to run better" (Pollitt and Bouckaert 2004, p. 8).

We agree with some influential scholars (among others, Hood 1991; Pollitt 1990, 2016), who argued that, as in the private sector, the above reforms have been largely dominated by an ideology that they defined as "managerialism". The latter revolves around the belief that all organizations (public and private, for-profit and non-profit ones), regardless of the sector in which they operate, can properly function and respond to the challenges of globalization only if decision-making power is in the hands of managers who have been adequately trained in the implementation of best practice.

Empirically, New Public Management (hereinafter NPM) is one of the most prominent manifestations of the above-mentioned ideology (Pollitt 2016). More specifically, NPM can be considered as a complex phenomenon that develops at two different levels.

At the deeper level, it is the doctrine that the public sector can be improved by borrowing the values, analytical methods and tools, practices and techniques which have proved to be successful in private organizations and have been assumed to be universally valid. This doctrine reduces the importance of politics under the motto "freeing managers to manage" (Pollitt et al. 2007, p. 200). Its rapid and wide diffusion is associated with other important global trends (Hood 1991) such as:

- The reduction or decrease in governments' expenditure on public services;
- The privatization of public services;
- The erosion of the traditional competences and authority of national public administrations in favour of supranational institutions;
- The introduction and development of digital information systems in the production and delivery of public services (i.e. an aspect that is particularly important in the context of this study).

At a more superficial level, NPM manifests itself in a less unified, often confused or even inconsistent way, especially when we consider it as a whole and particularly when we look at its concrete applications. At this level, NPM is an unordered bundle of concepts, schemes and practices, of which the following stand out as its key elements:

- Design and management of public organizations as if they were a set of clearly separate tasks and responsibilities (specialization and horizontal differentiation);
- Output (rather than behavioural) controls, based on specific and measurable performance targets, which are separately pre-determined for each single organization, operational department, manager and operator;
- Contractual relationships and market-type or quasi-market-type mechanisms as primary coordination devices;
- Efficiency and speed of procedures as key indicators of the success of the activities of the organization;
- Information systems as private and unrelated assets of separate organizational units;
- Treating public services users as "customers" (clients' *customerisation*);
- Competition between public and private organizations as the key means to lower costs and improve the quality of services.

Many critics have long pointed out the contradictions of NPM (Borioni 2017; Hood 1991; Hood and Dixon 2015; Hood and Peters 2004; Lapsley 2008; Perry et al. 2009; Pollitt and Bouckaert 2004). For example, contrary to the increased emphasis on a results-oriented

management style, the implementation of NPM-inspired reforms has often actually produced:

- Greater formality, regulation, and paperwork both inside public organizations and in their relationships with outside stakeholders;
- Increased standardization of work practices through the convergence on common best practices identified by means of benchmarking and comparative ratings.

In other words, the implementation of many NPM-inspired reforms has ultimately produced a style of management that is even more rules-based and procedures-driven than the administrative styles advocated by the classical doctrine of Public Administration. Nor, as empirical evidence shows, did the above consequences result in increased effectiveness and better quality of services.

Furthermore, several scholars precisely criticized NPM for the fact that it exclusively conceives assessment as a means of controlling the efficiency of procedures and making public organizations accountable for the quantitative results they achieve. More specifically, Gaudin (2014) argued that the emphasis on measurable results and cost-benefit analysis translated into the fetishization of numbers in line with the view of the world predominating in the private sector, which does not differentiate between effectiveness and economic efficiency and thus neglects the relevance of assessment to other, not less important, purposes. For example, the possibility that managers, professionals and policymakers will make more informed decisions; continuous improvement of the quality of services delivered; knowledge of how the delivery of services functions (i.e. organizational learning) and the production of scientific knowledge. In many domains of the provision of public services, particularly personal care services, the above reductive conception of assessment causes undesirable or perverse organizational behaviours, such as (Fryer et al. 2009; Hood 1991; Pollitt 2016):

- Excessive focus on the achievement of short-term measurable targets (outputs, e.g. the number of cases handled, passed on or completed) at the expense of longer-term objectives (outcomes), which

are not—or are only partially—measurable with a monetary scale or a set of indicators that can be translated into variables. For example, the independence of long-term unemployed families, the social integration of homeless people, the family care of Alzheimer's patients, the support provided to abandoned or abused children, the social inclusion of people with disabilities, the prevention of unwanted pregnancies among teenagers, the latent needs of individuals and the community;
- Significant reduction in the operators' professional capability (autonomy and competence) to adequately meet people's/users' needs. In fact, the emphasis on efficiency means that operators have neither the time nor the resources to experiment with innovative responses to the demands of the public or to monitor the latent needs of individuals, groups and the community. This, in turn, reduces the possibility of producing new knowledge about which interventions actually work[7] and learning to reflect, even critically, on the mutual relationship between services and needs.

A number of alternative proposals for managing the economic and societal aspects have been consequently developed in order to overcome the shortcomings of NPM. They share an emphasis on multilevel and polycentric governance. Some of the more general proposals fall under the umbrella term of New Public Governance (Osborne 2010), which argues for appropriate coordination mechanisms aimed at achieving more integration and "joining-up" of the various organizations involved in the delivery of public services, which often operate separately today.[8] In addition to the above, there are many other proposals that emphasize the democratization of the relationship between service specialists (managers and professionals) and citizens. Unlike NPM, they consider citizens not merely as passive service clients or consumers but as partners in the co-design, co-production and co-assessment of public services (Orlandini 2013). To mention just a few examples: "Civic Professionalism" (Sullivan 2004), "Collaboration and Partnership" (Vigoda 2002) and "Democratic Professionalism" (Dzur 2004).

New Public Management and Social Services in Italy

Italy is a country that has only recently reformed its Public Administration. In the 1990s, the internal dynamics of the political system as well as external pressures (some at the global level and others, more specific, from the European Union) brought about a period of NPM-inspired reforms in Italy, which have continued until today.

We are referring specifically to the various "reform packages" as identified by the names of the main proponents: Amato-Cassese (in 1992/1993), Bassanini (in 1997/2000), Brunetta-Calderoli (in 2009/2011), up to the most recent one introduced by the minister Marianna Madia which started with Decree Law No. 90/2014 (Rebora 2014).

The contents of these reforms, which are inspired in some way by NPM, are very varied; the following are some (non-exhaustive) examples:

- Contractualisation of the public employment relationship;
- Greater separation, especially at the local level, between the function of political orientation and the role of public managers;
- Introduction of the citizen's charter and public relations offices;
- Greater application of the principles of vertical and horizontal subsidiarity;
- Introduction of performance-related pay schemes for public employees, especially for managerial levels;
- Outsourcing and sub-contracting of activities, which were previously performed directly;
- Legalization of the political appointment of top management (spoil system) and an increase in their pay.

It must be noted that NPM only had a limited impact in an administrative system of French origin.[9] According to some scholars, the aforementioned "reform packages" actually failed to replace the traditional legal paradigm with the economic one (Panozzo 2000; Capano 2003 cited in Pollitt et al. 2007; Di Mascio and Natalini 2015).

In any case, it is in this context of the attempted reform of the Public Administration that at the beginning of the new millennium the Italian parliament introduced an important reform for the realization of an integrated system of social services, the Law No. 328/2000, *Framework Law for the implementation of the integrated system of social interventions and services*. The construction of the system, as provided for by the Law, must be implemented by applying "the method of planning interventions and resources, of management by projects, of systematic assessment of results in terms of quality and effectiveness of services, as well as of gender impact evaluation" (art. 3 para. 1). The fundamental pillars of the system are Local Plans (in Italian: "piani di zona"), planning policy, continuous assessment, and the implementation of information systems to support planning and assessment. Undoubtedly, this Law incorporates various elements of the long-term effects of NPM; however, it cannot be said that the spirit of the Law is merely constituted by managerialism: as it has been well argued (Cataldi and Tousijn 2015, p. 184), it contains elements of a "participatory" governance vision. This vision, we add, has at least partly been inspired by the cultural debate held by professionals, administrators and scholars of welfare policies between the seventies and the early nineties.

However, just when the Law No. 328/2000 was approved, the top-down managerial pressures on social services—and more generally on the welfare system—began to increase (Dellavalle and Palmisano 2013, p. 170). This caused social workers to go on the defensive: a national survey carried out in 2009 revealed that the great majority of social workers did not consider management and organizational tasks as an important part of their casework, or of their professional identity, but mainly focused on the direct relationship with users (Facchini 2010, p. 177). However, it should be remembered (Dellavalle and Palmisano 2013; Giorio 2009) that there is a long-established tradition of teaching organization (and administration) theory on social service training courses and the same "Code of Ethics for social workers" (approved in 2009) devotes an entire Title to the "Responsibilities of a social worker with regard to his employers".

Therefore, the aforementioned defensive attitude is not a symptom of a cultural deficit on the part of the social service in terms of

organization, or a general aversion towards "organizational work" (Terssac 2011). Rather, it must be interpreted as a resistance to a particular way of understanding the organization: a vision inspired by a pure economic managerialism—legitimized in large and influential portions of public opinion—which progressively aims to reduce the professional autonomy of the social worker, partly through direct control, partly through the proceduralisation of activities and the reduction of resources. Although it is well motivated, a merely defensive attitude is, however, incapable of provoking and managing a change to something that one is opposed to (Dellavalle and Palmisano 2013, p. 183). Many social workers agree to confine the scope of their professional autonomy to their relationship with the user, considering the organization as a given and non-modifiable context (produced by management): in so doing, they miss the chance to contribute to the implementation of important aspects of social policies, accepting a purely economic and hierarchical approach. Because of this tacit agreement, professional and organizational assessments—themes that have never received particular attention in Italian social services (Campanini 2013, p. 228)—are reduced to measuring the efficiency of some administrative procedures, typically those concerning monetary disbursements. The *core* of these services, whose activities are highly "personality-intensive" (Normann 1984, p. 17), is not evaluated: at the most, social workers are asked to contribute to data entry operations for the activation of bureaucratic procedures and for the production of a few simple process indicators.

Consequently, there is a lack of co-alignment between the technical level of the organization and the managerial and institutional levels, which instead is necessary for the administration of an organization to work well (Thompson 1967, p. 157). Thus, a strong primacy of managerial logics is established in the systemic governance of the organization and in the inter-systemic governance of organizational networks. Management is the only component to interact (from a position of strength) with the political level whereas the primary "sensors" of the needs of citizens are excluded from the definition of the strategic lines of the policies. The defensive action of social workers also negatively affects the collection and processing of information that would be necessary to base decision-making at all levels of the organization on empirical evidence.

Information Systems and Social Work in the International Literature and in the Italian Debate

The scientific debate on (Management) Information System originates in the United States in the late 1950s; originally, it referred to the use of electronic digital computers and its implication for the management of decision-making processes (Simon 1960). Since then, a field of theoretical reflections and empirical research has developed, which involves numerous disciplines from the fields of humanities, science and engineering (for a historical review of the Information Systems field see Hirschheim and Klein 2012).

Focusing on the information systems of social and socio-health services, we find numerous definitions of the Information System (hereafter IS) in the literature. In very general terms, many of them refer to a sociotechnical system of interactions and communications (see for example Lagsten and Andersson 2018) which, as A. Sakari Härö (1977, p. 701) already observed four decades ago,[10] doesn't limit itself to producing measurements and statistics: "In principle a health information system incorporates all possible channels that can convey answers to the questions put by the decision makers".

In the most recent Italian literature on the Social Services Information System (hereinafter SSIS), we find non-reductive definitions like the following one: "a non-random and structured set of elements aimed at gathering and managing information- that is, useful knowledge to reduce uncertainty in the decision making processes of end-users" (Busso 2010, p. 49).

Starting from this and other similar definitions, we can identify the following essential elements of a SSIS (as well as of other IS):

- Information, including quantitative data and qualitative texts;
- Tools and technical equipment for the collection, circulation, recovery and processing of information, including information and communication technologies (hereafter ICT);
- Rules and procedures;

- The network of stakeholders, formed by social work professionals, administrative employees, managers, ICT-staff, policymakers, etc., where information is produced, stored, exchanged and used.

It has been argued that the SSIS is a potentially vital part of social work, both for everyday practices and for the planning and scheduling of services. Indeed, starting from the 1980s, thanks also to the boost given by NPM and developments in ICT, many kinds of SSIS, with different purposes, have been implemented in different countries (e.g. Germany, Canada, Great Britain) such as online counselling systems, call centres, internet-based applications, case management systems, specialized tools for risk assessment or child abuse (Ley and Seelmeyer 2008).

Turning our attention now to the most common objectives of the SSIS, it is worth mentioning the following ones:

- Managerial: to provide operators and management with relevant information for case management, for administering intervention-related resources, monitoring/redefining workloads, running procedures and so on;
- Epidemiological: to represent the needs expressed by the population of a given territory, or by some segments of it, and to search for factors and conditions present in the environmental context that might have a negative impact on wellness and health and safety in their different meanings;
- Assessment: to provide information that is useful for assessing the effectiveness, efficiency and appropriateness of social and health services in preventing risk conditions and responding to the needs expressed by citizens.

Regarding the architecture of a SSIS whose conception aligns with what has been discussed so far, it is useful to start from the provisions of the aforementioned Law No. 328/2000. This Law, in fact, provides for (art. 21) the establishment of a SSIS in order "to ensure comprehensive knowledge about social needs, the integrated system of interventions and social services and in order to produce and make updated data and the information needed for the planning, management and evaluation

of social policies, the promotion and activation of European projects, the coordination with healthcare and training structures and work and employment policies available immediately". Such a system must be implemented by the State, Regions, Provinces and Municipalities, but it is not specified with which additional resources, how it should be implemented and how responsibility for it should be shared. The combined reading of the minimal operational indications of art. 21 with the other articles of the same law and with those of other laws or guidelines, has inspired the work of technical committees, institutional round tables and technical consultants.

The model of SSIS that has prevailed, at least "on paper", places the Regions in a key position as a kind of "control rooms" (Busso 2010) which:

- Coordinate local information systems (implemented by the individual Municipalities or working as part of a consortium);
- Connect the SISS with other public information systems (e.g. those of the national health system, of the social security service or the tax authorities);
- Apply the guidelines for compiling/exchanging information received from the Ministry for Social Policies and from the national statistical system (in Italian: Sistema Statistico Nazionale—Sistan).

However, the reality is much less linear than the model as can be seen by the case of the Piedmont Region. This is not a typical and representative case but it is of particular interest because Piedmont was one of the first regions to develop automated information systems[11] and therefore one would expect a good adherence to the normative model.

The Social Services Information System (SISS): The Piedmont Case

In Piedmont, the provisions of Law No. 328/2000 were developed immediately, while at the same time taking already existing laws into account.[12] The Regional Law No. 1 of 8 January 2004, "Regulations

for the realization of the integrated regional system of interventions and social services and reorganization of the reference legislation", provided for the standardization of the local information systems through the adoption of a common survey tool: the so-called "standardized social folder" to be compiled by social workers and linked to other automated databases. Seven years later, an Executive Decision (DD 131/2011) contradicted this Law, by financing the various local systems without imposing any constraint on their realization. In 2013, the Province of Turin, as the main organizer, convened a series of meetings with managers from different municipalities to discuss the uniformities and non-conformities of local systems and their future—and desired—integration. Three years later, in the document titled "The Territorial Social Services in Numbers", the Social Cohesion Directorate underlined that meetings with the managing bodies were organized in order to, among other things, "survey the state of maturity of the information system of the various institutions and the consequent repercussions on the quality of the data provided". More recently, the Deliberation of the Regional Council n.16-6646/2018 has included computerization among the objectives of regional policy so as: "to equip the region itself with a platform capable of gathering the territorial data in real time, thereby facilitating the flow of information towards the national collection systems". The objective of standardization and above all integration of the various data sources in the SISS in the Piedmont Region is evidently still far away, despite the measures taken.

One way to understand the reasons for this is to use the proposal by Lagsten and Andersson (2018) as an interpretative key to highlight the factors that can hinder the development of the social services information system. Specifically, the authors identify the following hindering factors: the interface of the information system is not very user-friendly (A), the mismatch between the social worker's view of the case and the one proposed by the system (B), inadequate training in the skills needed to use the computerized system (C), the limited production of statistical information for accountability and quality assessment (D), the absence of a shared vocabulary (E), the governance of an information system that had only been partially developed in terms of the co-alignment between social service practice and the ICT subsystem (F).

Similar criticalities, some of which perhaps raise doubts in the era of big data analytics, emerged from the analysis of interviews with operators and officials of two municipalities of the Piedmont Region, one large and the other small and working as part of a consortium for the management of social services.[13] In particular:

- The technical equipment, hardware and software, is obsolete; there are still few automated administrative procedures, and the use of paper remains excessive (A);
- The complexity of the cases treated is reduced to a few indicators, which are inadequate (B);
- There is insufficient time dedicated to the development of the operators' skills, especially front office staff, for the gathering and use of the information contained in the SISS, and it is mainly restricted to sporadic experiences (C);
- Current reporting based on process-produced data[14] is not useful for decision-making at all levels; furthermore, the processing cannot be carried out independently and flexibly by those who use the system on a daily basis, and therefore there is no important incentive to keep the databases up to date and to work together to improve the system (D);
- After many years of discussion between computer scientists and social service workers for the implementation of SISS in the region, there is not a specialist social worker—such as the *social work informatician* outlined by Parker-Oliver and Demiris (2006)—who has the knowledge and the information technology skills and whose primary tasks could therefore include the socialization of a basic technical language among professional colleagues and the translation of the lexicon of social work for computer technicians (E);
- The possibility of automatic sharing of information with other information systems of the same organization or even more with those of other organizations (e.g. organizations from the health care system) is still very limited; maintenance interventions on the system by external companies are expensive and time-consuming; local systems are self-contained and poorly (or not) interoperable; even in the same organizational unit, several separate, redundant and otherwise updated databases are in use (F).

Therefore, many social assistants perceive the Piedmont SISS first of all as a time-consuming management tool. The time they need to dedicate to the information system, together with filling in the paperwork, reduces the amount of time they can devote to the end user, except for some areas of the services in which filling in the electronic forms allows effective access to payments. Furthermore, because of the top-down design of the SISS, not aligned with the needs of the organization and profession, the system itself is not intended as a tool for gathering information useful for distributing workloads and for generating interesting data for service delivery, but rather as a tool to control and limit their professional autonomy. Whereas middle management emphasizes the importance of a cultural change, several interviews carried out with the social service professionals reveal an active organizational resistance (Oliver 1991) to the use of the official SISS producing separate parallel and informal systems for collecting data and documents, far from the idea of standardization that is the basis of the regional project.

Using Hirschman's (1970) three categories, we can say that this form of "exit" from the construction of a SISS with the necessary characteristics indicated by Law No. 328/2000 is understandable on the individual level, especially as an attempt to preserve the professional autonomy that is the responsibility of every social worker, but if adopted on a collective scale, it is a renunciation of the institutional mandate, which is clearly established in the code of ethics. On the contrary, adhering unswervingly to the procedures would betray both their professional and social mandates.

To summarize, each social worker in agreement with his representatives should increasingly make his/her "voice" heard also on the issues of the information system and assessment, and this includes asking for more training. The assessment of (and within) social services, in its various forms, deeply rooted in the best available evidence, is the responsibility of the social worker and has various good reasons behind it, including that of contributing to the consolidation and development of professional knowledge (Campanini 2006).

Assessment and Social Services: Two Key Questions and an Alternative Analysis Perspective

The preceding discussion about the management of public services, particularly social services, assessment and information system give rise to some questions, two of which seem key:

- Assuming that this is possible, is it really so important to assess social services organizations and their components (i.e. operational units and professional staff) in terms of efficiency?
- How should the information system be designed and implemented so as to effectively achieve the purposes established by the Italian Law No. 328/2000?

To address the first question, we shall draw on a classic text of the best organizational literature, i.e. *Organizations in Action* by J.D. Thompson (1967, chap. 7), who not only put forward a multidisciplinary theory of organizations, but also sent a message to management training centres.

In brief, according to Thompson, organizational assessment is driven by intentional and bounded rationality. The efficiency test is properly applied only to non-complex situations, which are characterized by low levels of uncertainty generated by the two sources that are key to the structuration of any organizational process: the standards of desirability and our beliefs about knowledge of cause–effect relationships. In other words, the efficiency test should only be applied when:

- The standards of desirability regarding the basic characteristics of the organizational outcomes are quite clear and crystallized. In other words, organizational goals, or desired outcomes, are not ambiguous, not a subject of debate within the organization and between the organization and the stakeholders in its task environment;
- The cause–effect relationships inherent in the technical knowledge applied to achieve the organizational goals are well known.

These conditions rarely occur in complex organizations, especially in those, such as social services, where the object of the transformation process are individuals, families and the community—that is, dynamic entities that cannot be shaped by the "intervention" and in fact actively contribute their feedback to the achievement of desired results (i.e. the intensive technology as defined by Thompson)—and where service delivery involves the combination of non-separable technical actions performed by different operational units and organizations related to one another by reciprocal interdependence.

This does not mean that the assessment of social services (and more broadly of personal care services) does not rely on the efficiency test. Drawing on and adapting Thompson's reflections for the purposes of the present study, we can see the position of the efficiency test as compared to the others that can be applied to assess complex organizations (see Table 9.1).

In brief, the efficiency test is not ruled out but it concerns procedures that have an administrative character and, in social services, represent "secondary", albeit not less important, processes in support of primary processes. The latter are the processes in which the professional competences of social workers and other social operators are mobilized in the process of helping people within a network of complex interactions that escape any attempt to formalize them in procedures. Consequently, the instrumental (effectiveness-based) test and even more frequently social tests are the most appropriate tests to assess the primary processes of social services.

On the other hand, Thompson pointed out that complex organizations should especially be concerned with the assessment of their fitness for the future in satisficing terms. To this end, the use of social tests is unavoidable since the future by definition is uncertain. This type of assessment situation is certainly typical of today's social service organizations that are increasingly faced with an economic, cultural and social context that is continuously subject to significant changes (see above, the Introduction). Following Thompson, this means that social service organizations should turn to social reference groups in order to define their standards of desirability, starting from the stakeholders in the task

Table 9.1 Types of uncertainty confronted by organisational processes and types of assessment of organisational action

Degree of uncertainty	Types of organisational assessment criteria	Examples with regard to social services
Low: standards of desirability are crystallized and knowledge about cause-effect relationships is complete	Efficiency test (cost-benefit analysis)	Has the new computerised procedure for the provision of benefits actually reduced the time between the decision made by the social worker and payment of the benefit by the municipal Treasury?
Medium: standards of desirability are crystallised but knowledge about cause-effect relationships is incomplete	Instrumental test (effectiveness-based assessment): whether and to what extent desired results have been achieved	Did the home care services delivered allow an adequate number of dependent elderly people to remain in their homes?
High: standards of desirability are ambiguous	Social tests: The organisation turns to reference groups (from whom it seeks legitimacy) in order to co-define/decide multi-dimensional assessment indicators and co-form qualitative judgments on the functioning of social services (mixed-methods-based assessments)	The classic dilemma is at stake here *: should we try to improve the relationships between parents and their children or immediately proceed to replace inadequate parents? *In Anglophone countries also known as "Damned if you do, damned if you don't"

Source Authors' own representation

environment on whom they mostly depend, thus considering their judgments in assessment, as well as the different and changing criteria they use to form them.

The analytic perspective just outlined above, drawing on the conceptual framework put forward by Thompson, aligns remarkably well with the approaches to the assessment of (and within) social services that have been developed since the 1980s, although, unfortunately, they have not become very widespread in practice yet, especially not in Italy. Such approaches emphasize "pluralism" in assessment (Sanfelici and Campanini 2015), arguing for:

- The plurality of points of view considered during assessment as well as of the involved assessors (e.g. social workers, management, service users, civil and human rights associations, the Department of Social Affairs, the round table of voluntary organizations) who are therefore asked to cooperate to define multidimensional indicators of assessment[15];
- (Especially within the realistic approach to assessment), the use in the assessment process of multiple methods for data collection and analysis (both quantitative procedures and indicators as well as qualitative methods and indicators that cannot be operationalized) and of different kinds of knowledge (both etic knowledge—drawn from scientific literature—and emic one—i.e. common-sense interpretations based on the experience of the various participants involved).

Social test-based assessment of social service organizations turns the assessment itself into a key means for the above organizations to gain legitimacy. Firstly, because social test-based assessment allows organizations to set desired outcomes deemed legitimate and valid by their stakeholders, and secondly because it offers publicly testable empirical evidence for the interventions that have actually worked, thereby allowing social service organizations and their specialists to continuously develop new knowledge and organizational competence and to build their professional reputation on this basis.

We now turn to the second question mentioned at the beginning of this section: How should the information system be designed and

implemented so as to effectively achieve the purposes established by the Italian Law No. 328/2000? Reflecting upon the failure of the SSIS in the Piedmont Region where the design and implementation of the system followed a top-down logic may be of help to address the above issue. We can draw various lessons from this experience. More specifically, the analysis of this concrete case based on the extensive body of literature on the SSIS suggests that, in the future, it will be necessary to attempt to avoid three fundamental risks in order to increase the likelihood of achieving the desired objectives[16]:

- *The risk of technological illusion.* The exponential development of information and communication technologies opens up an impressive number of new opportunities to organizations, in all fields. Undoubtedly, technological platforms based on web 2.0-related devices and the widespread use of open data and artificial intelligence techniques are (or will be) radically changing the criteria and methods of the development of information systems and thus the ways the various groups of users (both inside and outside public administrations) will interact with them. However, technology as such does not determine anything (neither in an enabling nor in a limiting way). Its design, adoption and use are the result of decisions that should be planned simultaneously with those concerned with other organizational dimensions;
- *The risk of colonization by external consultants*. It can also be referred to as "the illusion of participation". In the most widespread practice, in fact, the bottom-up design of the information system by external technical experts allows for the involvement of those who operate within the organization only when they receive training in the use of the system or at the testing stage. In contrast, it is necessary for a complex information system to be designed by drawing from the outset on the expertise developed within the work processes in accordance with a circular (top-down and bottom-up) logic, thus encouraging a dialogue between the knowledge produced in the work processes (emic) and the disciplinary knowledge (etic). By means of the more traditional methods (e.g. task forces and ad hoc committees) or the most recent ones (e.g. crowdsourcing) (Liu 2017), such a

kind of multi-stakeholder design should also involve the participants within society (e.g. associations, voluntary organizations, solidarity aid groups) with whom social services organizations should jointly develop social tests for the assessment of the more complex processes;

- *The risk of procedural reductionism.* The exclusive focus on routine activities leads all the participants involved to underuse the SSIS and encourages them to produce parallel, informal databases that, even if they may be less complete, nonetheless can be (and indeed are) used to take decisions at all levels. In the worst case, those professionals most closely involved with the actual problems experienced by the users of the services can come to consider the SSIS, the planning and assessment of social services as rational myths that management imposes on them both to control how professionals operate and to legitimate their own existence. But if those who should be the first users of the gathered information arrive at these conclusions, this will generate a self-fulfilling prophecy.

Conclusion

The functioning of public social services is fundamental to the success of social policies. As emphasized at the beginning, both greater professionalism in meeting citizens' demands and the capacity to manage the services better are needed. Although it is true that an excessive focus on the latter runs the risk of losing sight of the complexity of the demands citizens turn to social services in a manifest or latent way, "we cannot deny the co-responsibility of the profession, which has always paid little attention to the issue of costs of services and interventions and for a long time has neglected the opportunity to account for how it operates and evaluates the effectiveness of its work" (Dellavalle and Palmisano 2013, p. 181). Therefore, it is necessary that all those involved in social services acknowledge the need for rationalization and efficiency as well as for assessment, but assume them within a framework of interpretation consistent with their main mission.

We can summarize the results of our reflections on the three main areas that we consider essential, although certainly not exhaustive.

Overall, we believe that it is necessary to bring about a change of perspective that is capable of abandoning the managerialism underlying NPM, without giving up on the idea of innovation in public administration.

Specifically, it is first of all necessary both for those who hold managerial positions and for those who work on the front line or in the back office to adopt an appropriate idea of assessment, not affected by the efficiency and "quantophrenic" reductionisms ("if you cannot measure it, you cannot manage it"[17]) that are conveyed by managerialism via NPM. We believe that the conceptual framework put forward by Thompson constitutes a preliminary response to this need.

Secondly, a systematic collection of useful and non-redundant information is needed and this can be achieved by designing the social services information system in a participatory way, involving both the internal and external stakeholders of social services organizations.

Finally, we believe that it is necessary that social operators, first and foremost social workers, change their attitudes towards (poorly) designed information systems and (a reductive idea of) assessment: moving from a position of mere resistance to a clear, even conflicting, proactive stance. Rather than an obligation imposed by the need to manage scarce public resources, assessment must be considered as providing added value in social work. Precisely because the latter requires reflexivity, it needs evaluation tools that make its results as transparent as possible, thereby contributing to the development of the operator's competence in producing appropriate responses to the end users' needs and, at the same time, to the development of legitimacy and trust towards welfare. In other words, professionals working in public bureaucracies must begin to represent themselves no longer as *managed professionals* (Trivellato and Lorenz 2010) but as *managing professionals*. This is a first step, which must be followed by collective action in order to obtain acceptance.

As a final consideration, we stress that the need for a cultural change in the assessment of social services does not only involve social workers, even though they are the focal point of the system. Policymakers, managers and other categories of professionals, as well as academic courses for the training of social care operators, are all equally responsible for

the smooth functioning of these public services. If accountability has not yet become embedded in the culture of these services, responsibility is widespread: the "call for action" is directed at all categories of observers/participants, so that a set of values is established that favours the generative, creative and transformative potential of the individual agency.

Notes

1. Among many possible examples, think about respectively the ageing-related problems, the social alarm created by the phenomenon of bullying (today also in its cyber version) and the new addictions which are growing alongside the more classic ones or even combining with them.
2. Legislative Decree No. 147/2017, *Provisions for the introduction of a national anti-poverty measure* (subsequently amended by Budget Law 2018, No. 205). While we are writing this chapter, Decree Law No. 4/2019, *Urgent measures concerning citizenship income and pensions* has been converted into Law No. 26/2019. This "citizenship income", according to social policy experts, is rather a sort of minimum income. This provision restricts the concept of "citizenship" but considerably extends the potential audience of beneficiaries as compared to ReI, also including households who are not suffering from severe poverty. Moreover, still compared to ReI, the amount and duration of the benefit is expected to increase on average; the rules of access to the benefit also change: on the one hand, the means-test is loosened; on the other hand, the constraints on accepting active employment policies are strengthened. For a detailed analysis of the characteristics of citizenship income and ReI, see Motta (2019).
3. To give a partial idea of the level of expenditure on social services, it is sufficient to mention that in 2015 only that of the Municipalities (which are the main managing bodies, but not the only ones) amounted to approximately 7 billion, 1.8 billion more than in 2003 (Istat 2011, 2017). It was approximately distributed (Istat 2013, on data of 2010) as follows: 39% for interventions and services to the person, 27% for monetary transfers and 34% for (semi-) residential institutes and homes.

4. It is not possible here to extend further our scope of reflection, already sufficiently rich in topics, but in addition to social workers, much the same applies to other helping professions, e.g. social educators. Social Workers (and Specialist Social Workers) are the most established and principal figures in the social service systems of the main developed welfare regimes; in Italy, social workers have had a professional order since 1993 (Law No. 84/1993, *Regulation of social worker profession and institution of professional register*).
5. In some disciplines, assessment and evaluation have very different meanings, while in others they are synonyms. For the purposes of this chapter, we choose to consider them as synonyms.
6. "Social workers need to acknowledge that they are accountable for their actions to the users of their services, the people they work with, their colleagues, their employers, the professional association and to the law, and that these accountabilities may conflict" (International Federation of Social Workers—IFSW—and International Association of Schools of Social Work—ISSW, *Ethics in Social Work, Statement of Principles*, 2004, art. 5 para. 8).
7. Within management studies, the goal-setting theory (Locke and Latham 2002) has long highlighted that in complex work situations, setting performance rather than learning goals—as it indeed occurs where NPM is applied—reduces the workers' capability to discover new operational strategies, acquire knowledge and competences and master the work processes in which they are involved.
8. Like NPM, New Public Governance (hereafter NPG) is a label used for a collection of very different approaches and techniques. Judging both of them in general, some critics concluded that there are no substantial differences between NPG and NPM. For example, Pollitt (2016) argued that NPG is a mere corrective to NPM's disintegrative tendencies, which does not question the ideology underlying the latter, thus representing another manifestation of latent managerialism in the governance of public organizations. Similarly, Gaudin (2014) argued that NPM, and more broadly a sort of managerial efficiency without politics are the hard core of the alleged innovative approaches to the management of the public sector that have been indicated by the umbrella term of 'governance' since the 1990s and the 2000s. Specifically, Gaudin pointed out that this term refers to a worldwide doctrine of public management that, even though it apparently promotes

cooperative relationships between public and private organizations and increased citizens' participation in the planning and implementation of public policies, is indeed deeply rooted in market-based logic and managerialism. Accordingly, it only admits a form of participation that is strictly pre-determined and controlled from outside, and thus results in protecting and reaching a consensus about the cult of efficiency.

9. The fact that NPM-inspired reforms were not initiated and fostered by neo-conservative and neo-liberal governments but rather by center-left governments has certainly contributed to the peculiarity of the Italian case. This inversion of roles can be partly explained by the above-mentioned link between NPM and international transformations that transcend the political orientations of national governments (Cataldi and Tousijn 2015, p. 46).
10. Head of the Department of Planning and Evaluation, National Board of Health of Helsinki.
11. Some SSIS were in fact already present in various Italian regions, including Piedmont, well before Law No. 328/2000.
12. The activity of the Piedmont Region regarding the development of initiatives for the creation of tools for the automatic management of information flows in this area began immediately after the issuing of Presidential Decree No. 616/77 (Tresso 2013).
13. The interviews were carried out as part of the research coordinated by Willem Tousijn and Marilena Dellavalle entitled "Social Professions and Welfare System Changes" carried out in 2012–2014 by a multidisciplinary team from the Department of Cultures, Politics and Society of the University of Turin funded by the Regional Council of the Order of Social Workers of Piedmont (Tousijn and Dellavalle 2017). The meta-analysis of the interviews proposed here is original and does not coincide with other analyses of the same research contained in other publications.
14. These data are a by-product of the administrative activity of public offices and if appropriately aggregated can be used to support decision-making and planning activities also in the field of social policies. For a more in-depth discussion of the ways of integrating information flows for social planning with information flows for administrative purposes, see Mauri (2009).
15. In this regard and more broadly, the analytic perspective outlined in the present chapter, stressing the primacy of social tests in the assessment

of (and within) social services, resonates remarkably well with the above-mentioned perspectives that, unlike NPM, argue for the co-design, co-production and co-assessment of public and social services based on symmetrical and equal relationships between service specialists, users, their support networks, third-sector organizations who contribute their complementary resources and competences (Orlandini 2013). It is worth remembering that as regards public policy planning, Christensen (1985), drawing on Thompson's conceptual framework for the analysis of uncertainty in decision-making processes, more than thirty years before already offered suggestions for the formulation and implementation of public programs under conditions of high uncertainty, anticipating the principles of the current models of co-planning and co-production.

16. In what follows, we recall a diagnosis that is not new (see for instance Albano et al. 1993) and however seems to be still valid and aligned with both the preceding discussion and case study.
17. This motto is nothing but a poor paraphrase of what Lord Kelvin claimed in 1883: "When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind. It may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science" (Thomson 1889, p. 73). The current success of case studies and mixed-methods within which qualitative and quantitative research, although they perform different functions, have equal dignity seems to have contradicted him, at least in the field of social research.

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10

European Legal Perspectives on Customer Ratings and Discrimination

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Introduction

Screenwriters (Shteyngart 2011) and novelists (Brooker 2016) have already explored the dystopian prospects of a society where human interactions are constantly submitted to ratings. This is inspired by the growing presence in our daily lives of the possibility of rating work

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_10

performances, mostly through the well-known system of 1–5 "stars". This practice is particularly widespread in the gig economy, with the case of Uber being the most visible (and debated) example (Dzieza 2015). To use the judge's words in *Aslam and Ferrar v Uber* (ASLAM, FARRAR AND OTHERS v. UBER (2017), IRLR 4 (Employment Tribunal (2017)), this "amounts to a performance management/disciplinary procedure", as customer ratings are directly used by the platform to decide upon the relationship with the given driver, up to the deactivation of his or her account. However, the use made by Uber of customers' ratings has also been described as a vehicle for workplace discrimination, in light of the high potential for biases to creep into evaluations for drivers (Rosenblat et al. 2017).

Far from being inextricably intertwined with the specific nature of work on-demand via app, the phenomenon has a high potential of spilling over in other sectors, and notably to those characterised by customer-facing employees, from call centres to restaurants (Liu 2017). In fact, in our own work experience we are directly confronted with students' evaluations, which rate our performance as teachers. These evaluations, we are told, are relevant for the renewal of teaching contracts, promotions, tenure or future applications, although studies have highlighted the potential (gender) biases of these evaluations too (MacNell et al. 2015).

The growing presence of customer ratings is part of the trend towards the "scored society" (Citron and Pasquale 2014) and shares many of the risks highlighted by both computer and social scientists (Pope and Syndor 2011; O'Neal 2016). Hence, the use of customer ratings in employment decisions risks producing discriminatory outcomes, by exacerbating existing biases in society (Zarsky 2014, p. 1393) and "reproducing many of the same troubling dynamics that have allowed discrimination to persist in society" (Barocas and Selbst 2016, p. 732). What is more, the use of ratings in decisions related to employment provides an easy way to "launder" discrimination, by deploying an instrument which appears as neutral (Barocas and Selbst 2016, p. 1382; Pasquale 2015, p. 41). In this perspective, the use of customer ratings to evaluate worker performance and employment opportunities is indeed worrisome.

Studies on the gig economy already proved that it is not free from discriminatory practices (Edelman et al. 2017; McAfee and Brynjolfsson

2017, pp. 202–203). However, taking Uber as a particularly visible case study, no specific data is available to correlate ratings and protected grounds, although Uber seems to collect, at least in the US market, data related to the background of its drivers (Vaccaro 2017). Therefore, we argue, that the potential of this kind of ratings to reflect biases and prejudices held (even implicitly) by customers can be inferred by looking at comparable effects in other areas. Indeed, biases have been found to shape customer behaviours in, for instance, online marketplaces, resulting in lower offer prices and decreased response rates (Rosenblat et al. 2017, pp. 8–10). Furthermore, past studies have shown disparities in the tipping habits of taxi customers, highlighting how customers are consistently more likely to leave lower tips to drivers of minority background (Ayres et al. 2005). As Uber has long discouraged tipping (Rosenblat and Stark 2016, p. 3775), the rating given to the driver can be seen as a proxy for tipping and, as such, seems exposed to the very same kind of behaviour. Thus, we will proceed on the assumption that a similar argument can be made for other sectors exposed to the practice of customer's ratings.

As highlighted by Sunstein, "in a competitive market that contains private racism and sexism, then, the existence of third-party pressures can create significant spheres of discrimination", so that bending to the discriminatory preferences of customers might be a rational strategy (Sunstein 1997, pp. 153–154) and, as such, impossible to correct without the intervention of regulation. In this sense, we agree with AG Maduro that "market alone will not cure discrimination" (FERYN (C-54/07), ECLI:EU:C:2008:155, para 18). Therefore, a specific attention to the risks posed by the use of customer's ratings in employment relations seems warranted, one that would notably consider the fitness for purpose of non-discrimination law in light of these developments.

Our analysis focuses on the potential discriminatory effects of the use of customer ratings in employment-related decision-making. In this perspective, we propose a legal analysis of this phenomenon grounded in EU non-discrimination law. To do so, we draw from the recent case law concerning a seemingly disconnected subject, notably discrimination at the workplace on the ground of religion. Interestingly, the EU Court of Justice has ruled in this context that "the willingness of the

employer to take account of the particular wishes of the customer" cannot constitute a "genuine and determining occupational requirement" capable of justifying a discriminatory practice (BOUGNAOUI (C-188/15), ECLI:EU:C:2017:204 (Court of Justice EU), para 40). Hence, we propose an analogy between practices adopted by an employer to satisfy its customers' preferences and choices grounded on biased customer ratings. To do so, we first consider the applicability of EU non-discrimination law to such a situation (sect. "Discrimination and Customers' Wishes"), then we turn to the interrelated issues stemming from data protection law (sect. "Data Protection Challenges of Customer Ratings"). Finally, we assess the obstacles and potential outcome of such a challenge, and we propose alternative pathways to limit the potential for discrimination of the use of customer ratings in employment-related decisions (sect. "Obstacles and Pathways").

Discrimination and Customers' Wishes

We now engage with the question to what extent EU equality (or: non-discrimination) law is fit to protect workers who have been discriminated because their employer relies for a work-related decision on ratings given by customers who have experienced the service of the respective worker. In many service sectors, employers rely on customer experiences to rate the performance of their (self-employed) workers. As we saw, the most visible example is constituted by Uber, which allows its customers to rate drivers based on the routes they take, for slow traffic, or for refusing to speed (Cherry 2017, p. 12). However, ratings could also be based on, or related to, other criteria, such as sex, age, or race and religion. Current EU equality law—as employment law in general—rests upon the historically developed binary divide between workers and self-employed.[1] Atypical workers, amongst which platform workers, do not always fit easily within either the established worker or self-employed concepts. What then is the relevance of EU equality laws which are mostly anchored to workers (Kullmann 2018, p. 3)?[2] This question, which touches upon the personal scope of employment and equality law, is even more relevant since businesses increasingly rely on

customer ratings to decide on who may continue to work for an online platform or not. Given that customer ratings may have wide-ranging implications for an individual where a business (heavily) relies on them, there is no compelling reason to reserve protection resulting from the application of the non-discrimination/equal treatment principle to a selected group of privileged workers, to the exclusion of self-employed workers (Fudge 2006, p. 219). Workers, independent or not, are equally exposed to the biases of their customers.

Where an employer relies on its customers to judge the quality of the service provided by his or her workers, the question arises as to what extent an employer can be held liable for using its customers' rating. Is the customers' view attributable to an employer in such a case? Usually, customer ratings are processed through mobile applications or other web-based tools, using specifically designed algorithms. An algorithm can be described as "a formally specified sequence of logical operations that provides step-by-step instructions for computers to act on data and thus automate decisions" (Barocas and Selbst 2016, p. 674). The "behaviour" of a digital platform is specified by decisions taken at various levels in the company. Therefore, an algorithm may be designed to take into account requirements defined by the company's customers or any other stakeholder in or outside the company. In the end, however, there is always a conscious (human) decision that feeds into the algorithm (including its design) and the data model the algorithm will use to solve a particular problem. Importantly, algorithms play an important role not only in identifying useful patterns in datasets, but also in making decisions that rely on these patterns (Barocas and Selbst 2016, p. 677).

There is a widespread, though erroneous, belief that algorithms are free of subconscious biases (Cain Miller 2015; Kirchner 2015; Isaac and Dixon 2017). Mittelstadt et al. highlight the fact that operational parameters are specified by software engineers and "configured by users with desired outcomes in mind that privilege some values and interests over others" (Mittelstadt et al. 2016, p. 1). Emphasising the fact that technology is not autonomous, Felix Stalder highlights the influential role of human beings in designing the algorithmic models applied (Stalder 2017). In addition, an algorithm can only be as good as the

data it works with, meaning that the data model the algorithm analyses and uses to take decisions can be biased (Barocas and Selbst 2016, p. 680ff.). An algorithm may therefore "result in disproportionately adverse outcomes concentrated within historically disadvantaged groups in ways that look a lot like discrimination" (Barocas and Selbst 2016, p. 673). Underlining the fact that "[a]lgorithms are not immune from the fundamental problem of discrimination", it should be stressed that "negative and baseless assumptions congeal into prejudice" (Pasquale 2015, p. 38).

Therefore, it is the employer, that is, the company using particular algorithms, who has a say in how customer ratings do look like and whether and to what extent such ratings should feed into the worker's performance feedback. By allowing customer ratings to feed into the employer's decision-making on how the worker performs, even though it is perhaps the algorithm taking the ultimate decision, the employer externalises his right to give directions and instructions as part of the employment relationship. Hence, the customer becomes part of the firm, playing an active role in the service encounter and the worker bearing the responsibility for any failure or success (Wang 2016, p. 265). As ratings are mostly made available in relation to service jobs where customer satisfaction is important, customers (can and will) therefore play a powerful role in determining the terms, conditions, and privileges of employment (Wang 2016, p. 250). Consequently, customer ratings can be seen as "good customer service" (Wang 2016, p. 262).

But can the employer, according to EU equality law, be held liable for taking (indirect) discriminatory decisions regarding worker performance, where he relies for his decision on a customer's point of view and personal experience? So far, EU case law has only cursorily dealt with the role of customers in relation to employment relationships. Nevertheless, there is limited EU case law where businesses rely on customer preferences, which shows the possible tension between business interests, i.e. satisfying customer needs, and the right of individuals not to be treated differently based on, for instance, their ethnic origin or religion. In FERYN, an employer declared "publicly that [he] will not recruit employees of a certain ethnic or racial origin" (FERYN

(C-54/07), ECLI:EU:C:2008:397 (Court of Justice EU)). The reason the employer gave for not recruiting "immigrants" was because its customers were reluctant to give them—as fitters—access to their private residences. As the employer's statement is likely to strongly dissuade certain candidates from submitting their candidature and, consequently, to hinder their access to the labour market, the Court of Justice EU found that this constitutes direct discrimination in respect of recruitment within the meaning of Directive 2000/43/EC (FERYN (C-54/07), para 25).

In addition, the Court of Justice EU ruled that for the assessment whether someone has been discriminated, it is irrelevant whether there has been an identifiable victim, thereby increasing the for interest groups to take action against business strategies that may deter individuals from applying for a particular job (FERYN (C-54/07), para 23). A lack of an identifiable complainant cannot lead to the conclusion that there is no direct discrimination (FERYN (C-54/07), para 25). Furthermore, in BOUGNAOUI, in which the customer requested the employer "that there should be 'no veil next time'", it was ruled that a customer's preference could not be regarded as a genuine and determining occupational requirement justifying a discrimination.[3] Advocate General Sharpston emphasised that a "customer's attitude may itself be indicative of prejudice based on one of the 'prohibited factors', such as religion", and therefore "it seems […] particularly dangerous to excuse the employer from compliance with an equal treatment requirement in order to pander to that prejudice" (BOUGNAOUI (C-188/15), para 133). She further stresses that Directive 2000/78/EC confers protection in employment against adverse treatment based on one of the prohibited factors (religion or belief, disability, age or sexual orientation, Article 1): "It is not about losing one's job in order to help the employer's profit line".

From the few cases at EU level, it can be derived that a customer's wish or preference seems to be irrelevant for establishing whether it was the employer who directly or indirectly discriminates his workers. Indeed, as AG Kokott in her opinion in the ACHBITA case wrote, it certainly may be the case that an undertaking takes, even must take, into consideration the wishes of third parties. Otherwise, it would be

unable to sustain its presence in the market. Nevertheless, an undertaking cannot "pander blindly and uncritically to each and every demand and desire expressed by a third party" (ACHBITA (C-157/15) ECLI:EU:C:2016:382 (Opinion of AG Kokott), para 90). Thus, it is still the employer who relies on a customer's wish and by doing that has the power to discriminate a worker because of his or her sex, religion, age, or any other protected ground. Thus, under EU law, the discrimination by a customer's rating is attributable to the employer, meaning that compliance with EU non-discrimination laws can be enforced against him. There is no possibility for employers to "hide" behind decisions that themselves have not directly taken.

Customer ratings might, to use an example mentioned by Zarsky, be implicitly discriminatory, that is, discrimination through masking (making discrimination undetectable, or defensible) (Barocas and Selbst 2016, p. 692), subconscious discriminatory motivations (long learned biases) and relying upon tainted datasets or tools (datasets or data collection models which systematically discriminate, e.g. due to relying on workers' previous achievements, overrepresented negative information) (Zarsky 2014, p. 1389). While EU law only knows two types of discrimination, the question to be answered is whether this concerns direct or indirect discrimination.

An individual who thinks that he or she has been discriminated against, needs to establish relevant facts. According to the CJEU in the FERYN case (para 30), where there are facts from which it may be presumed that there has been discrimination, the defendant has to prove that there has been no violation of the principle of non-discrimination. Statements made by an employer that it will not recruit workers of a certain racial or ethnic origin are such facts. The EU legislature has adopted measures to assist applicants claiming to be victims of discrimination on the grounds of, for instance, sex, age or origin. Nevertheless, the shift in the burden of proof does not go so far as to uphold its complete reversal. Employers enjoy a long-standing freedom to recruit the people of their choice, which must not be completely disregarded (GALINA MEISTER (C-415/10), ECLI:EU:C:2012:8 (Opinion of AG Mengozzi)).[4] The shift of the burden of proof means that it is then for the employer to present sufficient evidence to prove that it has not

breached the equal treatment principle, by showing, for instance, that the actual recruitment practices do not correspond to the statements at stake (Watson and Ellis 2012, pp. 162–163).

Establishing the relevant facts can be particularly problematic where this would involve (sensitive) information of third parties, such as other applicants or co-workers. Here, the KELLY case is of interest, concerning an unsuccessful applicant who believed that his application was not accepted because of an infringement of the principle of equal treatment. According to the Court of Justice EU, the applicant would not be entitled to receive information held by the course provider on the qualifications of the other applicants for the course in question, in order that he may establish "facts from which it may be presumed that there has been direct or indirect discrimination" (KELLY (C-104/10), ECLI:EU:C:2011:506 (Court of Justice EU)). It thus cannot be excluded that a refusal of disclosure by the defendant, in the context of establishing such facts, could risk compromising the achievement of the objective pursued by that directive and thus depriving that provision in particular of its effectiveness (KELLY (C-104/10), paras 34, 38).

Furthermore, in ACCEPT, the Court of Justice EU ruled that a *prima facie* case of discrimination on grounds of sexual orientation may be refuted with evidence, including a reaction by the defendant distancing itself from public statements on which the appearance of discrimination is based and the existence of express provisions concerning its recruitment policy. However, it is unnecessary for a defendant to prove that persons of a particular sexual orientation have been recruited in the past, as this would interfere with their right to privacy (ASOCIAȚIA ACCEPT (C-81/12), ECLI:EU:C:2013:275 (Court of Justice EU), paras 57–58).

These cases, where an individual assumes he has been discriminated against, show that there might be difficulties for individuals to get access to their ratings to (try to) prove the alleged discrimination, as this might touch upon the right to privacy of third parties involved, among which customers and co-workers. Nevertheless, in a case where a worker has been dismissed, in a number of EU Member States the employer will have to motivate its decision, unless the worker's fixed-term contract automatically ends without being renewed. Collective agreements may

specify the procedures for workers' ratings, providing the necessary information based on which the worker can know what kind of information will be included in the employer's decision-making. Moreover, data could be anonymised so that no personal data will be disclosed.

Data Protection Challenges of Customer Ratings

The system of customers' ratings is currently implemented by almost every platform as a way to build trust within the community and preserve the attractiveness of the platform (Goldman 2010; Busch 2016; Thierer et al. 2016; Botsman 2017; European Commission 2017). In principle, ratings may help reduce the inherent information asymmetry within the parties, and, potentially, they can promote the overall transparency over the transaction: they are third-party reviews, reporting previous experiences with a particular buyer or service provider. In other words, rating systems have codified the word of mouth (Dellarocas 2003). Indeed, users can acquire a privileged amount of information that they would not be able to get from the counterparty, thus overcoming the difficulties, described by behavioural science (Luth 2010), related to informed choices (Busch 2016, p. 12; Stemler 2017, p. 683). As Busch underlined: "Considering the limits of human attention, such consolidated ratings can help to mitigate the problem of information overload which could be caused by a large number of confusing and contradictory reviews. The use of consolidated ratings thus takes into consideration the problems of bounded attention and bounded rationality and increases the salience (i.e. the cognitive accessibility) of the most important information" (Busch 2016, p. 12).[5]

In addition, in many platforms users rate each other. Hence, scoring systems constitute an incentive for users to follow the rules of the community and to behave accordingly: participants are nudged to act in a way to keep the digital platform a safe and trustworthy place (Bolton et al. 2013).

The role of ratings is pivotal because it can influence the choices not only of the users-potential-buyers but of the platform as well. Therefore, it can produce significant consequences on the weakest subjects, such as

the providers of the service (e.g. the Uber drivers). Indeed, bad scores and comments given the users of the platform may severely affect the digital reputation of the worker and, as a consequence, his/her activity: customers could decide not to accept a service from someone with a low score or, in the worst scenario, workers could be excluded from the platform. For example, if Uber's drivers have an average score under the threshold of 4.6, their account can be deactivated, which basically means that their contract with the platform is terminated unilaterally (UBER TECHNOLOGIES v. BERWICK (2015), California Labor Commission). In Belgium, the minimum score is even lower, namely 4.5.[6]

Hence, despite their potential benefits and the promise towards more transparency, ratings mechanisms are far from being a perfect instrument to assess the quality of a performance: customers may complain fraudulently just to get a refund or a discount or they may give an inaccurate score because of a mistake or a personal bias (Rosenblat et al. 2017, p. 8ff.). Such a problem, which inherently depends on personal behaviours, is not usually counterbalanced by a mechanism to "review the reviews".

In our view, the problem with scores is twofold and largely depends on how the platform designs the system.[7] First, such ratings are highly subjective, but the score expressed in stars (from 1 to 5) give a false sense of objectivity. In other words, it turns a qualitative opinion about an overall experience into a quantitative one, generating a problem of oversimplification or, worst, inaccuracy. Furthermore, because of how the system is built, customers are not often aware of the difference between the score, for example, of 4 or 5 stars. It is true that, in some platforms as Uber, customers are also allowed to leave a comment, where they can offer details about the reason for the score. However, as previously mentioned, to get 4 instead of 5 stars can really make a difference for an Uber's driver.

Secondly, as shown by Dambrine et al., some platforms in the sharing economy do not facilitate the access to the reputation scores nor provide efficient means to challenge the accuracy of the reviews nor, in some cases, allow the erasure of bad comments and scores (Dambrine et al. 2015, p. 9ff.). This is also the case of Uber, which—on the basis of information available—does not provide any ability to challenge or

respond to ratings (Dambrine et al. 2015, p. 11). Indeed, the Privacy Policy currently in force does not offer many details on how to handle bad evaluations: it generally states that "after every trip, drivers and riders are able to rate each other, as well as give feedback on how the trip went. This two-way system holds everyone accountable for their behaviour. Accountability helps create a respectful, safe environment for both drivers and riders. Your rider rating is available in the main menu of the Uber rider app. Your driver rating is available in the Ratings tab of the Uber Partner app".[8] In the Section EU User Rights, the platform recognises some rights, such as the right to "request an explanation of the information that Uber has about you and how Uber uses that information" and the right to "receive a copy of the information that Uber collects about you if collected on the basis of consent or because Uber requires the information to provide the services that you request" (a limited version of the right to access), the right to erasure of the whole account (and not of particular type of information), the right to object to the processing, the right to file a complaint but only within the Dutch Data Protection Authority where Uber has its own European establishment, the right to rectification.[9] The latter could be relevant when it comes to challenge a score. However, in the Privacy Policy section "Explanations, copies and corrections", there is not specific information about the procedure to follow, apart from a link to a general form for filing requests to the Uber's Data Protection Officer.[10]

Such a situation of opaqueness is likely to conflict with data protection rules.[11] For instance, scores and reviews given by customers and referring to platform workers can be qualified as "personal data", as they are a typology of information relating to an identified or identifiable individual.[12] As affirmed by the Article 29 Data Protection Working Party (hereinafter "WP29")[13] and confirmed by the Court of Justice EU in NOWAK (C-434/16, ECLI:EU:C:2017:994, para 42), the concept of personal data can include not only "objective" information but also "subjective" information, like opinions or assessments. Therefore, ratings fall under this notion. As a result, the processing of this information should be guided by the data protection fundamental principles (lawfulness, purpose limitation, data minimisation, notice and consent, etc.) and, in principle, data subjects shall be entitled to exercise

their rights under Arts 15ff. With specific reference to the processing in the context of employment, the GDPR leaves a certain amount of discretionary power to the Member States that can provide for more specific rules (Art 88(1) GDPR). In any case, such rules "shall include suitable and specific measures to safeguard the data subject's human dignity, legitimate interests and fundamental rights, with particular regard to the transparency of processing, the transfer of personal data within a group of undertakings, or a group of enterprises engaged in a joint economic activity and monitoring systems at the work place" (Art 88(2) GDPR).

In the light of the limitations often enforced by platforms through technological and contractual means, we have identified three main points of frictions with the GDPR.

1. *Consent*. Informed consent has always been one of the pillars of the European data protection framework and its role has been further emphasised in the GDPR. According to Article 4(11) GDPR, consent must be: (a) freely given; (b) specific; (c) informed; and (d) unambiguous. In other words, it has to be a "clear affirmative act"[14] and therefore the platform shall implement only opt-in mechanisms (e.g. no pre-ticked boxes or implicit consent). A preliminary problem deals with the highly questionable obtainment of the consent when the worker accepts the Terms of Service and privacy policy of the platform: is this consent actually freely given as required by Article 7(4) GDPR?[15] In its Opinion on consent, the WP29 affirmed that "freely given" means that the data subject (the worker, in our case) has to be able to "exercise a real choice" and that "there is no risk of deception, intimidation, coercion or significant negative consequences if he/she does not consent".[16] As an example of controversial situation, the WP29 refers precisely the employment relationship, where the data subject is under the influence of the data controller (the employer) and he/she is not in the position of refusing the processing especially if it is a condition for the employment.[17] In the context at stake, the consent is unlikely to be freely given: platforms' workers have to accept the rating system if they want to offer their services through the platform and therefore they are obliged to consent to the dissemination of their personal data (scores) which will be accessible to any user of the platform. However, platforms may invoke another

legal ground rather than consent, such as the legitimate interest (Art 6(1)(f) GDPR).[18] Interestingly enough, from Uber's Privacy Policy is not possible to understand what is the lawful basis for the processing of drivers' ratings.

2. *Right to access*. The right to access is a precondition for the other data subject rights: only if the data subject is aware of what data are processed, by whom and how he/she can successfully pursue his/her other rights guaranteed under the GDPR (Ausloos and Dewitte 2018). For the purpose of this analysis, some provisions of Article 15 GDPR results to be particularly interesting. In fact, the data subject is entitled to receive from the data controller the following information: (1) the existence of the right to request from the controller rectification or erasure of personal data or restriction of processing of personal data concerning the data subject or to object to such processing; (2) where the personal data are not collected from the data subject (which will be the case of rating assigned by customers), any available information as to their source; and (3) the existence of automated decision-making, including profiling, and, at least in the cases ex Art. 22(1) and 22(4) GDPR, meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject.

First of all, as several studies indicate, the ability to access is often poorly implemented in the online environment and filing an access request may result in a task far from being trivial (Ausloos and Dewitte 2018). In addition, as already noticed, there are no well-developed tools that allow an effective and timely rectification of inaccurate data (see Art 16 GDPR) nor their cancellation (Art 17 GDPR) for platform's workers.

Secondly, according to the GDPR, the data controller shall communicate to the data subject the source of information: however, ratings given by customers are usually aggregated and anonymised. Therefore, the worker of the platform is generally unable to defend himself from the author of the bad review. Indeed, the right to access may be limited if it can affect the rights and liberties of other individuals (recital 63 GDPR), as it can be the case of the right to privacy of other co-workers

or users of the platforms, but such considerations cannot lead to "a refusal to provide all information to the data subject" (recital 63 GDPR).[19]

In addition, it has to be recalled that the scope of application of the right to access is limited to data subjects' personal data. In the case of ratings, this can create an additional challenge because a non-aggregated review is a personal data both for the user giving it (the rider) that for the user receiving it (the driver). Therefore, in ensuring the right of access it will be crucial to ensure appropriate safeguards for all the people involved. However, *a fortiori,* the right cannot be exercised in order to get access to information (such as ratings and evaluations) related to the "colleagues".[20] The impossibility to have access to the latter could constitute a serious impediment if the worker wants to discover and demonstrate whether he/she was subject to any discriminatory behaviour by the platform.

Finally, the GDPR has introduced a specific provision which aims at fostering transparency and some authors have welcomed this innovation as the "right of explanation" of the algorithm logic (Goodman and Flaxman 2017; Malgieri and Comandé 2017; Selbst and Powles 2017). This leads us to the third point of friction with the GDPR.

3. *The right not to be subject to solely automated individual decision making*. Article 22 GDPR expressly recognises that the data subject has the right to not be subject to a decision which is basely only on an automated processing of his/her data, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her. To the rules follows three exceptions (see Art 22.2 GDPR), in particular, if the decision is necessary for the performance of the contract between the data subject and the controller. However, in this case the data subject shall receive "meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing" (Art 14(2)(g) and Art 15(1)(h) GDPR) and at least the "right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision" (Art 22(3) and recital 71 GDPR). This means that profiling directed to measure data subject's performance at work (and that can result in his/her

automated exclusion from the platform) cannot be based only on the aggregation of different scores given by customers without the possibility of any human intervention or to contest the decision. However, reading *a contrario* such provisions, if the processing is semi-automated—or not automated at all—the data subject cannot enjoy such rights. Hence, if the platform demonstrates that the exclusion of a user from the system is partially based on automated clustering of customers ratings but the final decision is taken by a person (e.g. from HR), the worker could eventually rely on Art 16 GDPR (right to rectification) only. However, in its recent guidelines on automated individual decision-making and profiling, the WP29 has clarified that: "the controller cannot avoid the Article 22 provisions by fabricating human involvement. For example, if someone routinely applies automatically generated profiles to individuals without any actual influence on the result, this would still be a decision based solely on automated processing. To qualify as human intervention, the controller must ensure that any oversight of the decision is meaningful, rather than just a token gesture. It should be carried out by someone who has the authority and competence to change the decision. As part of the analysis, they should consider all the available input and output data".[21] It is worth noting that the mentioned "token gesture" is usually what happens in most of the cases related to the gig economy, where the worker is excluded from the platform if his/her ratings tragically fall under a predetermined threshold.

Obstacles and Pathways

As we stated in our Introduction, we argue that an analogy can be drawn between the decision of the Court of Justice EU in BOUGNAOUI, notably the part concerning customer preferences, and the use of customer ratings in employment-related decisions. However, it should be noted that in BOUGNAOUI the Court of Justice EU only denied that customer preferences could represent a genuine occupational requirement. This is only relevant if a *direct* discrimination is alleged.[22] Similarly, as we saw before, pandering to (alleged) customers'

preferences could not excuse a direct discrimination, as it was the case in FERYN. It is by no means clear that such a reasoning would be extended in a case of indirect discrimination. Indeed, an indirect discrimination only needs to be objectively justified by a legitimate aim, while the means of achieving that aim should be appropriate and necessary.[23] This warrants a particularly cautious approach to the applicability of this case law to the phenomenon here at stake.

Considering that the appearance of neutrality is a characteristic of the "scored society" (Pasquale 2015, p. 35), it is indeed likely that judges might assess the situation as one of indirect discrimination. As stated by Morozov: "Here we run into the perennial problem of algorithms: their presumed objectivity and quite real lack of transparency" (Morozov 2013, p. 248). A *prima facie* case of indirect discrimination needs to be demonstrated through significant statistical data showing the adverse impact of the measure on persons characterised by one of the protected grounds. However, the ability of the individual worker to have access to data related to customer ratings runs against important obstacles, as these ratings are related to *other* workers, and as such are beyond the scope of data to which he or she can demand access. Furthermore, to provide a meaningful comparison, and hence statistical proof of discrimination, the worker would need to receive data related to ratings of individuals characterised by the same protected criterion, hence covering an information which the employer might not be entitled to collect in first place (Watson and Ellis 2012, p. 155; Zarsky 2014, p. 1403).

If such an obstacle can indeed be overcome, and a *prima facie* case of indirect discrimination is hence established, it is arguable that the employer would not be able to hide behind the black box of customer ratings to justify his decision. This would in fact make it impossible the application of non-discrimination law by mere obfuscation, something which has been ruled out by the Court of Justice EU in DANFOSS.[24] The question would then turn in one of justification.

The precedents of BOUGNAOUI and ACHBITA have shown that the Court of Justice EU is willing to accept employers' organisational choices as legitimate aims, on the basis of the freedom to conduct a business enshrined in Article 16 EU Charter of Fundamental Rights. In these cases, the Court of Justice EU has found the wish of the employer

to "project an image of neutrality towards the customers" to be a legitimate objective. Thus, as highlighted by Vickers, the fact of responding to customers' preferences, which could not be used to justify a direct discrimination, was instead deemed a legitimate objective in the context of an indirect one (Vickers 2017). Furthermore, the Court of Justice EU did not in any way consider whether the choice in favour of such an image was in any way necessary for the business at stake.

One can only wonder whether a similar fate would await the choice of using customer ratings for assessing the performance of workers. After all, Uber stresses the importance of customer ratings to keep "a top tier service for riders".[25] The wish to project a certain image seems sufficiently broad a concept to be employed also in this context, as an "image of neutrality" is not per se distinguishable from any other image an employer might be willing to project—apart from those which might be explicitly illegal. An "image of neutrality" does not appear to be more legally protected than, for instance, an image of punctuality, cleanliness, friendliness and so forth, all of which could justify the decision to use customer ratings to assess workers' performances, some of which already feed into the automated assessment, either by customers or by the algorithm itself. It would be of interest to know then whether and to what extent the different images mentioned may bear a gender aspect.

The fact that customer ratings are only used to assess customer-facing workers might also fulfil the requirement of proportionality, if one follows the reasoning of the Court of Justice EU in ACHBITA, where it stated: "[…] what must be ascertained is whether the prohibition on the visible wearing of any sign or clothing capable of being associated with a religious faith or a political or philosophical belief covers only G4S workers who interact with customers. If that is the case, the prohibition must be considered strictly necessary for the purpose of achieving the aim pursued" (para 42). Moreover, the distributed nature of some services prone to use customer ratings (from the gig economy to call centres) might also suggest that using this form of control is indeed necessary for maintaining a control over the quality of the service provided, and hence to ensure the desired *image* of the company.

Analysing this issue in the context of US law, it can be concluded that non-discrimination law is ill-equipped to fight discriminatory

practices grounded in customer ratings (Rosenblat et al. 2016, p. 5). Our conclusion in the context of EU non-discrimination law is presently similar. Even if sufficient data to prove an indirect discrimination can be presented, we argue that an employer, following the reasoning of the Court of Justice EU in ACHBITA and BOUGNAOUI, would be able to justify the use of customers' ratings on the basis of their equal application to all workers, their importance for the image of the company and their application only to customer-facing workers. In the end, EU non-discrimination law would prove more useful to protect against the single employer holding discriminatory views (or pandering to the same views from a specific customer) than against widespread prejudices among customers. We wish to stress that this conclusion is based on a limited number of precedents, so that it is still a possibility that new decisions by the Court of Justice EU might go in a different direction.

That being said, we argue that, in light of the obstacles for *ex-post* remedies, which seem difficult to overcome without sacrificing the privacy of other workers, *ex ante* solutions should be explored to preserve the effectiveness of non-discrimination. The insidiousness of the alternative has been highlighted by AG Sharpston in her Opinion in the BOUGNAOUI case, when she pointed out that accepting "the argument, 'but we need to do X because otherwise our customers won't like it' […] [w]here the customer's attitude may itself be indicative of prejudice based on one of the 'prohibited factors'" would be akin to excusing "the employer from compliance with an equal treatment requirement in order to pander to that prejudice" (para 133).

The data protection framework could offer a set of rights and remedies which may ensure, in principle, a fairer balance of interests of all the subjects involved in the processing, but they cannot eliminate the risk of discrimination perpetrated by the platform via its customers ratings (Rosenblat et al. 2016, 10).[26] Indeed, as affirmed by the European Data Protection Authority during the Computer, Privacy and Data Protection Conference, held in Brussels in January 2018: "Data protection tools alone will not create a better world. We need to go beyond mere compliance".[27]

Keeping this exhortation in mind, we present a proposal that aims to reduce the risk of discrimination and enhance the transparency,

through a more effective IT implementation of data protection principles. The main problem, as we have seen, is that the battering-ram able to demonstrate a discrimination, the right of access, is often limited by its very nature (data subjects can access only their personal data) or by the other competing rights and freedoms. In the light of the principles of data protection by design and data protection by default, now expressly codified at Article 25 GDPR, we propose a solution to burst the "rating bubble", by keeping the privacy of all the subjects and, at the same time, ensuring the effective exercise of the rights recognised under the GDPR. First of all, if customers are not satisfied with the service and leave a bad review, they should not be able to save the score without—at least, succinctly—explain the reasons of the complaint. Secondly, when the workers want to have access to their data, they have to be entitled to see the consolidated score in a disaggregated form, in order to identify the bad reviews. To ensure the protection of interest of the customer giving the rating, the platform should provide the information in a pseudonymised form. Since the bad review should be annotated with a short comment from the customer, the workers should be able to address them and explain their point of view. In addition, they shall always be entitled to request to the data controller how the consolidated rating has been calculated. Therefore, they could ask the platform for the rectification or the erasure of the score from their consolidated rating. While this verification is pending, the platform will have to recognise the workers their right to the restriction of the processing (Art 18 GDPR), in order that the bad score will not affect their consolidated rating until the issue is clarified.

In any case, the platform should not be entitled to terminate the contract with the worker without giving to him/her the possibility to challenge the bad score. In addition, if the platform still takes a serious decision against the worker, the latter should be able to have access to the de-identified scores of the "colleagues" in order to challenge the platform's decision.

A further alternative might be found in systems of auditing for scoring algorithms (Sandvig et al. 2014; Pasquale 2015, pp. 150–151), which could be transposed in the context of customer ratings. Citron and Pasquale notably propose that scoring systems should be subject to

licensing and audit requirements when they enter critical settings like employment, insurance and health care (Citron and Pasquale 2014, pp. 21–22). Transposing this in the context of the phenomenon here at stake, employers would have to disclose data related to ratings to independent auditors/independent agencies. These independents actors would then be able to assess the potential biases of the ratings themselves, as well as of the resulting decisions,[28] and hence their suitability as a ground on which to base employers' choices. To provide an incentive to allow for the auditing to take place (Zarsky 2014, p. 1388), one might imagine a shift of the burden of proof for those employers basing their decisions on an un-audited rating system. A similar "stick" could also be used to underpin our previous proposal dealing with access to ratings. Alternatively, to preserve the effectiveness of non-discrimination law, legislators should take steps to ensure that customer ratings are treated as an intrinsically insufficient ground for employment-related decisions. As such, these decisions should *also* be based on grounds *other* than that of customer ratings.

Notes

1. Unlike some countries, under EU employment law, there is no in-between category of independent workers or employee-like persons.
2. An exception is Directive 2010/41/EU of 7 July 2010 on the application of the principle of equal treatment between men and women engaged in an activity in a self-employed capacity and repealing Council Directive 86/613/EEC (L 180/1).
3. According to the CJEU, a genuine and determining occupation requirement "cannot, however, cover subjective considerations, such as the willingness of the employer to take account of the particular wishes of the customer" (para 40).
4. Cf. Article 16 EUCFR.
5. By "consolidated ratings", the Author refers to the score resulting from the aggregation of different reviews given by the customers and expressed in "stars" or other kinds of indicators.
6. Such information was retrieved after having sent a direct request to Uber. In fact, the criteria for the deactivation policy are available online

only for Denmark, Ireland, Puerto Rico and Norway. See https://www.uber.com/legal/deactivation-policy/dk-dk/.

7. For an overview of different types of rating systems, see Pettersen, "Rating Mechanisms Among Participants in Sharing Economy Platforms", 22 *First Monday* 12, 2017, available at http://firstmonday.org/ojs/index.php/fm/article/view/7908/6586. In the attempt to ensure more transparency and accuracy of ratings, the International Organisation for Standardisation (ISO) has recently issued the standard ISO 20488:2018 "Online consumer reviews — Principles and requirements for their collection, moderation and publication", modelled on the French standard NF Z74-501 (https://certificats-attestations.afnor.org/referentiel/NF522).
8. See "Choice and Transparency", Section C "Rating Look-up", https://privacy.uber.com/policy/.
9. See "Special Information For EU Users", Section 1, https://privacy.uber.com/policy/.
10. https://help.uber.com/riders/article/submit-inquiry-to-uber-data-protection-officer-dpo?nodeId=489292a2-27ce-42f5-9a47-d4dd017559fd.
11. For the purpose of this analysis we will take into consideration the provisions of Regulation (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation, GDPR) (L 119/1), which will be applicable on May 2018.
12. See now Article 4(1), GDPR.
13. WP29, *Opinion 4/2007 on the concept of personal data* (WP136), 20 June 2007, p. 6.
14. Recital 32 GDPR.
15. According to Article 7(4), GDPR "when assessing whether consent is freely given, utmost account shall be taken of whether, *inter alia*, the performance of a contract, including the provision of a service, is conditional on consent to the processing of personal data that is not necessary for the performance of that contract".
16. WP29, *Opinion 15/2011 on the definition of consent* (WP187), 13 July 2011, p. 12. See now, WP29, *Guidelines on Consent under Regulation 2016/679* (WP259), 28 November 2017.

17. WP29, *Opinion 8/2001 on the processing of personal data in the employment context* (WP48), 13 September 2001. See now, WP29, *Opinion 2/2017 on data processing at work* (WP249), 8 June 2017, pp. 6–7.
18. On the concept of legitimate interest, see WP29, *Opinion 06/2014 on the notion of legitimate interests of the data controller under Article 7 of Directive 95/46/EC* (WP217), 9 April 2014.
19. See also Article 15(3) GPDR.
20. As affirmed by the Italian Data Protection Authority, who denied the possibility of some employees of a local health unit, which were involved in a procedure for the economic recognition of personal productivity, to get access to *note di qualifica* ("assessment of performance") and evaluations related to other concurrent employees. See, Italian Data Protection Authority, decision of 6 February 2001, available at http://www.garanteprivacy.it/web/guest/home/docweb/-/docweb-display/docweb/39236 [Italian only].
21. WP29, *Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679* (WP251), 3 October 2017, p. 10.
22. Directive 2000/43/EC, Article 4; Directive 2000/78/EC, Article 4; Directive 2006/54/EC, Article 14(2).
23. Directive 2000/43/EC, Article 2(b); Directive 2000/78/EC, Article 2(b); Directive 2006/54/EC, Article 2(b).
24. CJEU, C-109/88, *Handels- og Kontorfunktionærernes Forbund i Danmark v Dansk Arbejdsgiverforening, agissant pour Danfoss*, ECLI:EU:C:1989:383, para 13.
25. Uber's Welcome Packet ("What Uber looks for"), quoted in *Uber BV, Uber London Limited and Uber Britannia v Aslam & Others*, UKEAT/0056/17/DA.
26. As pointed out by Rosenblat, Levy, Barocas, and Hwang: "Through a rating system, consumers can directly assert their preferences and biases in ways that companies would be prohibited from doing directly".
27. Giovanni Buttarelli, *Closing Speech at the Computer, Privacy and Data Protection Conference*, Brussels, 25 January 2018.
28. Including, for automated decisions, the way in which algorithms using customer ratings are designed.

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Part III

Conclusion

11

Is Performance Appraisal Compatible with the Employment Relationship? A Conclusive Plea in Favour of an Achievement-Oriented Approach to Work Organisation

Edoardo Ales

Together with pay, performance is the basic element of any employment relationship. In traditional legal terms and, more specifically, in the individual employment contract perspective, performance consists of the fulfilment of the obligations arising from the contract. At turn, those obligations substantiate in the availability of the employee to perform the tasks agreed according to the terms and conditions as predetermined by the individual contract, by collective agreement, if any, and by the law. Further to availability, the employment contract recognises to employers such managerial prerogatives as to allow them to specify the modalities of the performance, within the framework of those terms and conditions.

The extent to which managerial prerogatives should or could be exercised in order to specify the performance as fulfilment of obligations by each employee, qualifies the performance itself and, by consequence, the work relationship, as more or less dependent or 'autonomized',

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*,
https://doi.org/10.1007/978-3-030-26538-0_11

although remaining within the boundaries of the employment contract, subordinated by definition.

If the nature of the work organisation require managerial prerogatives to be exercised incessantly, the performance will consist of the mere availability and dependency of the employee, placed under strict and heightened employer's direction and control powers. In such cases, continuous control will constitute a crucial feature of the work relationship and the exercise of control power will focus on the respect of specific orders issued with the aim to fit the individual performance into the general organisational programme of the undertaking to which employees remain extraneous. In these circumstances, the performance as fulfilment of employee's obligations as well as employer's satisfaction will result in employees' availability, to be understood in terms of punctual physical presence at the workplace, and in the respect of the given orders. Of course, this is not the case in the so-called digital workplaces, in which availability and physical presence cannot coincide.

However, if the work organisation still requires managerial prerogatives to be exercised incessantly, the same professional diligence, due by employees in the 'performance as fulfilment of obligations', is at risk of playing a negligible role. Skills, knowledges or capabilities, to use a more fashionable word, would not be that relevant if the execution of tasks totally depend upon and coincide with employees' respect of employer's orders.

In such a perspective, if understood outside the pure piecework system of production, it is inappropriate and misleading to talk about performance in terms of results, as something different from the fulfilment of the contractual obligations. Appraisal as well will have no citizenship in such a context. This has nothing to do with the traditional (and outdated) distinction between obligation of means, typical of subordinate work, and obligation of results, typical of autonomous work. Quite at the opposite, it derives from a work organisation of such a kind that does not allow (stimulate) employees to approach the fulfilment of their contractual obligations in terms of individual or collective achievement although within the framework of an employment relationship. Indeed, the establishment of the latter, further than the attribution of managerial prerogatives, should entail the interest of the employer in stimulating employees' achievements functional to the outcome the same employer, as entrepreneur, expects from the activity undertaken.

One could say that only an inefficient employer/entrepreneur could be satisfied by performance as mere fulfilment of employees' contractual duties as described in the above.

On the other hand, it is clear that, in order to conceive the performance also in terms of individual or collective achievement, an efficient employer/entrepreneur is needed, willing to invest into and capable to set up a work organisation that allows and stimulates employees to go beyond their availability to fit into a given framework they cannot contribute (are not interested) to shape. This kind of commitment is something that goes beyond employers' cooperation duty to employees' fulfilment of contractual obligations, in terms of issuing orders and directions.

Actually, such a proficient approach, from the one hand, entails an exercise of managerial prerogatives aimed at setting up a work organisation based on employees' empowerment and activation; from the other, it requires a certain degree of self-restraint in that exercise, to which a proportionate margin of manoeuvre (autonomy) for employees as individuals or as a group shall correspond. Empowerment, activation, self-restraint and autonomy can be looked at as organisational features freely chosen by the employer/entrepreneur within the framework of an employment relationship in which some managerial prerogatives have been transferred to the employees in the perspective of an individual and/or collective achievement-oriented approach to performance, typical of a dynamic work organisation. At turn, employers/entrepreneurs play a decisive role in coordinating and harnessing employees' achievements into the achievement of the work organisation as a whole, to be understood as the outcome of the undertaking, as such falling within the sole responsibility of the employer/entrepreneur.

The achievement-oriented approach to performance may represent a promising heuristic tool in order to clarify, above all to labour lawyers and the courts—organisational scientists being aware of it since the fifties, that one can understand performance as something more than the fulfilment of contractual obligations. This is to say as individual/collective achievement, in most of the cases, different from the outcome of the undertaking as a whole. That approach can also help in admitting performance appraisal in the employment relationship otherwise excluded, from the traditional legal point view, which looks at the performance as outcome as typical or even exclusive of autonomous

work. Finally yet importantly, the achievement-oriented approach to performance can be useful in demarcating employees' responsibility only to cases of mean achievement or to cases in which the latter coincide with the bad performance of the undertaking (organisation) as a whole.

In other words, the achievement-oriented approach allows differentiating between the traditional, judicial, basic understanding of performance as proper fulfilment of contractual obligations—like working time and health and safety measures but also the avoidance of errors that can damage the undertaking, and a proficient understanding of performance as individual or collective *effect utile* for the outcome of the undertaking as a whole.

From a strict legal perspective, the distinction between basic and proficient understanding of performance allows also to shed light on the long-standing issue of underperformance in the employment relationship. In fact, assuming the achievement-oriented approach, one can say that underperformance is at stake only if the employee brings an *effect utile* lower than that expected (agreed upon) by the employer. Therefore, underperformance is intrinsically linked to the proficient understanding of performance and has nothing to do with the basic one. This means that a bad performance in its basic understanding coincides with a violation of contractual terms and conditions and can give rise to a disciplinary responsibility of the employee, while in the proficient one, it refers the insufficient contribution (*effect utile*) employees as individuals or groups have brought to the undertaking.

As already emphasised in the above, the possibility to make expectations legally binding lays in employers/entrepreneurs hands, depending upon the way in which they shape the work organisation. It is clear that a passive fitting of employees into a predetermined structure are likely to make the proficient understanding of the performance as well as the diligence irrelevant. On the contrary, focusing on the individual or group achievement relegates the basic understanding to a secondary, although if appropriate always significant, position, emphasising the diligence perspective as employers' interest to a proficient performance. Benchmarking is therefore crucial for any achievement-oriented organisation, since by defining the boundaries of the diligence required to the employees, at the same time it outlines the scope of their autonomy and the limits to employers/entrepreneurs demands, in the view

of avoiding the abuse of diligence by the latter in terms of stretching unduly employees' contractual obligations.

Benchmarking plays also a decisive role in the view of determining the scale of performance appraisal in comparative terms. Indeed, contrary to infringement of contractual duty (performance in the basic understanding), underperformance (bad performance in its proficient understanding) of some individuals or groups is at stake only if other individuals or groups within the same undertaking have met the benchmarks as set. This shows that they were attainable.

Therefore, one can say that the establishment of an achievement-oriented organisation highlights, also from a juridical point of view, the existence of a 'collective dimension' of appraisal, in the sense that the efficient employer/entrepreneur looks at employees' performances (in their proficient understanding) as parts of a whole to be coordinated and harnessed in the view of producing the desired outcome of the undertaking. This confirms that, within the employment relationship, the employer cannot purport a result from the employee in the meaning of outcome/organisational achievement, with the consequence that the latter cannot be held responsible for the bad performance of the organisation.

On the other hand, the adoption of an achievement-oriented approach, entailing the distinction between performance in its basic and proficient understanding, pinpoints, as well, the presence for the employee, of a double responsibility—disciplinary (basic), in case of violation of contractual terms and conditions, and for underperformance (proficient). The latter as triggered by the fact that employee's performance did not meet the benchmark set by the employer who has an achievement-oriented organisation. On the contrary, if performance appraisal shows that the employee has met employer's expectations (as benchmarked), the former will be entitled to the rewards (bonuses) usually attached to an achievement-oriented approach to performance. At turn, in case of underperformance, no reward (or one of a lower amount) will be paid and this will already constitute a 'sanction' as well as a warning (in terms of correction needed) against the employee who did not met employer's expectations. To several negative performance appraisals, the termination of the employment relationship can follow.

Such a theoretical framework, finds its factual confirmation in two case law streams, originating, respectively, in Italy and Germany, both EU Member States still with rather different Labour Law systems. However, the problematic starting point is the same: how can the employer lawfully react in case of substandard employee's performance, in its proficient understanding, to which, however, a fulfilment of contractual terms and conditions (performance in its basic understanding) without blame corresponds. In the Italian case law, what is at stake is *scarso rendimento* (underperformance) as lawful ground for dismissal to be distinguished from the traditional objective (incapacitation [disability] and sickness or business) and conduct-related reasons of termination of the employment relationship. In the German case, at stake is the possibility for the employer to release a positive although non-enthusiastic *Arbeitszeugniss* (job reference) under the same conditions as recalled in the above.

As for the Italian stream,[1] the importance of 'emancipating' underperformance from objective and conduct-related reasons, is of all evidence in the view of allowing performance appraisal in the employment relationship, by recognising to the employer a 'third way' in cases in which neither economic grounds or physical impairment nor misconduct in its traditional understanding are at issue. Dismissal as consequence of a reiterate negative performance in its proficient understanding, within the framework of a benchmarked appraisal system, although socially undesirable, is crucial in order to guarantee the credibility and the effectiveness of an achievement-oriented approach to performance. In this respect, Italian case law highlights the importance of a clear setting of attainable goals (benchmarking), the presence of which shall exclude that underperformance is due to an inefficient work organisation.

Italian Courts seems to confirm the rightfulness of a two-track approach to performance as illustrated in the above (in its basic and proficient understanding), as well as the necessity, for the employer, to look at the individual achievement as part of a whole, in which the comparative and collective dimension of appraisal plays a decisive role. In such a perspective, the refusal of Italian case law to consider the single employee responsible of the bad outcome of the work organisation looks fully understandable. Above all in cases of lack of an

achievement-oriented approach by the (inefficient) entrepreneur and, as a consequence, of exclusive presence of a basic understanding of performance as fulfilment, without blame, of the contractual terms and conditions and as respect of employer's orders.

The absence of blame seems to be a crucial element also for German case law called to decide on the lawfulness of a positive although non-enthusiastic *Arbeitszeugniss*, employees are entitled to according to § 109 *Gewerbeordnung*.[2] If no blame is at issue, the employer shall express satisfaction (*Zufriedenheit*) not as subjective assessment of the performance but as objective appraisal based on the comparison with employees performing the same tasks with the full use of their capabilities. Nevertheless, if the absence of blame obliges the employer to express an 'average' satisfaction, is up to the employee to prove that it should have been above average, just because of the absence of blame. A very complicated *Zufriedenheitskale* has been developed by case law, which ranges from an average satisfactory (in absence of blame—*befriedigend*) to a very good (*stets zur vollsten Zufriedenheit*), in case the employer would like to express a full satisfaction that could be equate to the proficient understanding of the individual performance as part of a whole.

Anyway, even the German scale-approach to employers' satisfaction seems to confirm the need of a two-track attitude to performance in its basic and proficient understanding. What is at stake in this case is the possibility for the employer to express and to communicate, 'To Whom It May Concern', an ambivalent appraisal from which it will be clear that the satisfaction refers only to performance in its basics, not reaching the fullness attached to the proficient understanding.

In conclusion, one can advocate that, from a juridical point of view, performance appraisal is compatible with the employment relationship in so far as the efficient entrepreneur/employer adopts an achievement-oriented approach, which allows distinguishing between performance in its basic and proficient understanding. This opens up the way to a reward/punishment system that is likely to increase the chances for the work organisation as a whole (undertaking) to produce a positive outcome. By consequence, the proficient understanding can be seen as precondition of legitimation, in the legal perspective, of performance appraisal as managerial prerogative.

Notes

1. As for the most recent decisions: Cass. Sez. Lav., 5 December 2018, n. 31487; Cass. Sez. Lav., 9 October 2018, n. 24828; Cass. Sez. Lav., 13 June 2018, n. 15523; Cass. Sez. Lav., 8 May 2018, n. 10963; Cass. Sez. Lav., 10 November 2017, n. 26676; Cass. Sez. Lav., 23 March 2017, n. 7522; Cass. Sez. Lav., 22 November 2016, n. 23735; Cass. Sez. Lav., 19 September 2016, n. 18317; Cass. Sez. Lav., 7 August 2015, n. 16582; Cass. Sez. Lav., 2 September 2015, n. 17436; Cass. Sez. lav., 9 July 2015, n. 14310; Cass. Sez. Lav., 4 September 2014, n. 18678; Cass. Sez. Lav., 11 October 2013, n. 23172; Cass. Sez. Lav., 12 June 2013, n. 14758; Cass. Sez. Lav., 31 January 2013, n. 2291; Cass. Sez. Lav., 18 May 2011, n. 10934; Cass. Sez. Lav., 1 December 2010, n. 24361.
2. As for the most recent decisions: BAG, 18 November 2014 – 9 AZR 584/13; BAG, 17 January 2008 – AZR 536/06.

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T. Addabbo et al. (eds.), *Performance Appraisal in Modern Employment Relations*, https://doi.org/10.1007/978-3-030-26538-0